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ABSTRACT

This reference book focuses on six aspects of the geography of the People's Republic of China. They are: territory, governing units, population and land use, waterways, land forms, and climates. Designed as a primary reference, the book explains how the Chinese people and their lifestyles are affected by China's geography. Special components included in each chapter contain easily located subtopics, vocabulary and definitions, and a glossary with pronunciation keys. In addition, each subtopic contains questions that act as guide posts for locating the main information in bold type, margin symbols, maps, photos, charts, and diagrams. A resource list is included. (TRS)

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CONNECTIONS

Reference Book

Marie B. Kalat
and
Elizabeth F. Hoermann

C·L·C
Community Learning Connections, Inc.
75 Mt. Vernon Street, Boston, MA 02108

Corrections
for
CHINA CONNECTIONS
Reference Book

Chapter 1: Territory

p. 3, line 10: "does their land size" should read "do their land sizes."

p. 5, line 5: "115°W" should read "125°W."

p. 6, Figure 1-2: "Unites" should read "United."

p. 10, line 16: "sq. km.)" should read "sq km)." There should not be a period following abbreviated metric measurements.

Chapter 2: Governing Units

p. 14, #5: "*Buddist*" should read "*Buddhist.*"

p. 15, #17: "*surburban*" should read "*suburban.*"

p. 17, line 8: "29" should read "30."

p. 17, line 24: line should read "smallest province, other than Taiwan, is about the size of Kentucky . . ."

p. 18, map: "Xinging" (capital of QINGHAI) should read "Xining."

p. 20, map: "Xinging" (capital of QINGHAI) should read "Xining."

p. 21, line 24: "*surburban*" should read "*suburban.*"

p. 27, map: western part of SICHUAN should not be shaded (see map on page 29).

p. 28, line 4: "Shangai" should read "Shanghai."

p. 31, line 20: "30°N" should read "33°N."

p. 33, line 15: "Chengdu, its capital" should read **"Chengdu, its capital."**

p. 34, line 3: "know" should read "known."

p. 37, last line: "officials" should read "officials."

p. 38, line 1: "overs" should read "covers."

p. 39, line 9: line should read "who lived from 1835 to 1908. Like many in the ruling families before her, she used public . . ."

p. 39, lines 19-20: lines should read "for five calvarymen or 10 footsoldiers to march along side by side. The main wall winds across China for more than 3,750 miles (6,000 k) from . . ."

p. 40, lines 8-9: "40 miles (25 k.)" should read "47 miles (75 k)."

p. 41, lines 13-15: lines should read "Today tourists can enter the tombs of two emperors. One of the tombs, known as Ding Ling, rests four stories below ground and consists of three chambers. The Emperor, Wan Li, was buried there with his two wives in 1620. Some of the objects . . ."

p. 48, next to last line: "*Buddist*" should read "*Buddhist.*"

Chapter 3: Population and Land Use

p. 54, #4: "*feed*" should read "*fed.*"

p. 55, line 9: "Others" should read "Other."

p. 56, last line: add line "(Figure 3-3 on page 59)."

p. 57, line 8: "countires" should read "countries."

p. 64, line 15: "as" should read "so."

p. 64, line 23: "*250*" should read "*240.*"

p. 66, line 5: "grown" should read "grow."

p. 66, line 15: "Field" should read "Fields."

p. 67, last line: "*feed*" should read "*fed.*"

p. 68, line 8: "dryer" should read "drier."

p. 70, lines 15 and 17: "diary" should read "dairy."

p. 76, line 2: "land products" should read "land and products."

p. 77, line 17: "grow" should read "grown."

Chapter 4: Landforms

p. 80, #2: "*artifical*" should read "*artificial.*"

p. 80, #3: "*Guangxi province*" should read "*Guangxi autonomous region.*"

p. 81, line 13: "include" should read "influence."

p. 88, line 2: "3,000 (900 m.)" should read 3,000 feet(900 m)."

p. 89, line 4: **"difficult the farming"** should read **"difficult is the farming."**

p. 91, last line: "*artifical*" should read "*artificial.*"

p. 92, line 11: "oasis" should read "oases."

p. 96, lines 2 and 3: lines should read **"of China and the United States, First,** the only American basin, the Great Basin, is a desert and not very productive. The Great basin covers part of . . ."

p. 100, next to last line: "province" should read "autonomous region."

p. 103, last two lines: lines should read "rock pinnacles reach 600 feet (200 m) above valleys."

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Chapter 4: Landforms (cont.)

p. 105, line 3: "is" should read "has."

p. 108, line 11: "tracks" should read "tracts."

p. 112, line 7: "1,500 and 1,950 feet" should read "13,130 and 16,400 feet."

p. 113, last line: "sparsely populated" should read "very sparsely populated."

p. 115, last two lines: lines should read **"oases. Lhasa, the city, is fairly densely populated. However, the general area around Lhasa is very sparsely populated."**

p. 117, line 4: "formed" should read "found."

p. 117, last line: "Nanjiang" should read "Nanjing."

p. 118, line 15: "Tranjin" should read "Tianjin."

p. 119, line 4, "oasis on irrigated tracks" should read "oases on irrigated tracts."

p. 119, line 9, "Hohhot, capital of Heilongjiang province" should read "Hohhot, capital of Inner Mongolia autonomous region."

p. 119, last two lines: lines should read "sparsely populated. Urumqi is one of the densely populated areas. The city of Lhasa is densely populated, although the area around Lhasa is very sparsely populated.

Chapter 5: Waterways

p. 122, #11: definition should read *"A river and its tributaries that form a network of waterways in a given area."*

p. 130, map KEY: "Huebi" should read "Hubei."

p. 132, "Yellow" column, 6th box: "Ningxi" should read "Ningxia."

p. 134, last line: definition should read *"A river and its tributaries that form a network of waterways in a given area."*

p. 135, line 10: "1934" should read "1954."

p. 137, line 9: line should read, up of several rivers. The two major rivers are the Xi and Pearl. "Xi" . . .

p. 141, line 12: **"In"** should read **"The."**

p. 143, line 12: "(Figure 5-8)" should read "(Figure 4-16 on page 114 and Figure 5-8)."

p. 145, line 13: **"very density"** should read **"very high density."**

p. 146, map KEY: "Huebi" should read "Hubei."

p. 149, line 6: line should read "the winter season."

Chapter 6: Climates

p. 153, lines 10-12: lines should read "crops and animals to feed all its people. When a geographer looks at population distribution, climate and topography are two aspects considered."

p. 159, first paragraph: paragraph should read **"China's major mountain ranges also influence precipitation.** Cold air can hold less water vapor than warm air. When the air gets cold enough, it releases some of its water vapor. When this happens, it rains. As the air moves up to the top of a mountain, it cools. If it gets cold enough, it rains. As the air moves down the other side of the mountain, it warms and can hold more water vapor. The other side of the mountain is drier."

p. 161, lines 23-25: lines should read "Units' capitals and special cities. The summer temperatures vary little except for Lhasa. The winter temperatures vary a great deal."

p. 163, chart: last four lines should read "To change centigrade to Fahrenheit you multiply centigrade figure by 9 and divide by 5 and than add 32, the formula is F = 9/5C + 32. To change Fahrenheit to centigrade you subtract 32 from the Fahrenheit figure and then multiply by 5 and divide by 9, the formula is C = (F-32) 5/9."

p. 168, line 15 and 16: **"growing wheat in"** should read **"growing wheat. In."**

p. 172, line 14: "northeast" should read "northwest."

p. 173, line 12: "population" should read "climates."

Glossary

p. 181, fodder: *"feed"* should read *"fed."*

p. 181, karst: *"Guangxi province"* should read *"Guangxi autonomous region."*

p. 182, river system: definition should read *"A river and its tributaries that form a network of waterways in a given area.*

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Dear Reader,

*The **China Connections** Reference Book focuses on six factors of the geography of the People's Republic of China. They are territory, governing units, population and land use, waterways and climates. The purpose of this book is to explain how these factors influence where the Chinese people live and how many live there.*

As you read this book, you will find out interesting facts and comparisons with other countries. For example, did you know that China has the largest population of any country in the world? You will also learn about similarities and differences between the geography of China and the United States. Did you know that although both countries have about the same land size, China has four times the population of the United States? This difference has a major impact on how the people of China and the United States use their geography.

*The Reference Book is designed as the primary reference for **China Connections.** However, it is not the only source of information you should rely on. Another part of the **China Connections** Program is the Features. These articles focus on how the Chinese people and their lifestyles are affected by China's geography. Check additional resources in your community, particularly libraries.*

Special components are built into this book to aid you in locating specific information. Each chapter begins with a table of contents so that sub-topics can be easily located. There is a vocabulary and definitions page following the table of contents. This page includes vocabulary words, pronounciation key, definition and page number in the book where each word is introduced. Each vocabulary word is introduced in the book by italic type and its definition is printed at the bottom of the page or nearby page. The glossary includes the pronounciation key and Chinese proper names pronounciation.

Each sub-topic begins with one or more questions that act as guideposts to locating the main information. The main information is printed in bold type. Most of the full-page maps are the same scale so that they can be superimposed over each other. Other visual aids are photographs, charts and diagrams. Margin symbols have been added to help locate certain types of information. The symbols used represent information particular to China ( ), global associations ( ), United States comparisons ( ) and the three major Geographic Regions — South China (S), North China (N) and West China (W).

We would appreciate receiving your comments on the effectiveness of the Reference Book. Please write to us at the address below.

We hope you both enjoy learning about China and its people through its geography and draw upon this information in the future.

Sincerely,

Marie B. Kalat

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Co-author

Elizabeth F. Hoermann

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C·H·I·N·A

CONNECTIONS

Reference Book

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The Many Names of China

The People's Republic of China? Communist China? Red China? Mainland China? Republic of China? Nationalist China? These are the many names you have heard about when people talk about China. How can one country have so many names?

To answer this question, you must know a little of China's history. China is a very old country. For two thousand years it was ruled by emperors. This kind of government is called an "imperial government". Then, in 1911, the people revolted against the emperor and took away his power. These people who revolted were called "Nationalists".

The Nationalists wanted to start a government where the people had some say in how they were governed. They wanted a government somewhat like the democratic government of the United States.

But the Chinese people were not used to electing their own leaders. As a result, the country was not run in an orderly way. Instead, different groups tried to take control by force. After a while, there was a war between the two most important groups, the Nationalists and the Communists.

After many years the Communists won. On October 1st, 1949, their leader, Mao Zedong, declared that his party was now in charge of the government. They called the government "The People's Republic of China".

The Nationalists did not surrender to the Communists. They did not want to live under Communist control. So, they fled to an island off the coast of China. This island was called Formosa at the time. Now it is called Taiwan. The Nationalists started a government of their own on Taiwan. They called their government "The Republic of China". (Notice that the only difference between the two names is that the word "People's" is missing from Taiwan's name.)

Both the Communists and the Nationalists claim that **they** represent all of the Chinese people. The Nationalist party is hoping that one day the Communist government will be overthrown. Then, perhaps, the Nationalist Party will be able to return to the mainland and govern all of China, including Taiwan.

In the meantime, which country is the "real" China? Most countries of the world have decided that mainland China is the "real" one. When a country makes a decision like this, it has "recognized" that country. (That's another way of saying that the country agrees, "Yes, you really **are** the country you claim you are".) The United States was one of the last countries of the world to "recognize" the People's Republic of China. Until 1979, they recognized the Republic of China instead.

So, that's where the confusion arose—from two countries both wanting to be known as the "real" China. Over the years, to keep the two straight other names have come into use. "Communist China" came about, naturally because China was communist. "Red China" was used because red is the symbol of communism. "Mainland China" was made up to tell apart the government (Communist) on the mainland from the government (Nationalist) on the island. "Nationalist China", of course, refers to the government formed by the Nationalist party, the one which fled to Taiwan.

This book deals with the People's Republic of China, otherwise known as China.

1
领土
Territory

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1.2 Global Position 4
1.3 Land Size 6
1.4 Bordering Countries 7
1.5 Coastal Waters 9
1.6 Coastal Islands 10
1.7 Summary 12

Vocabulary and Definitions

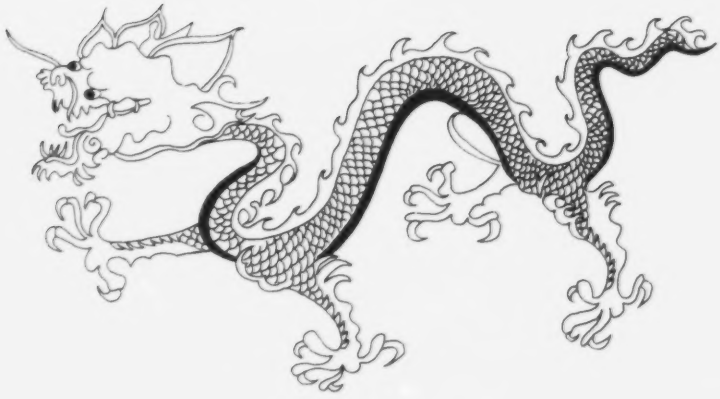
1. *brocade (brō kād')* . . . . . *A cloth with a raised design woven into it.* *p. 11.*
2. *continental shelf (kon'tənen'tl shelf)*
   . . . . . *An area of shallow water next to a continent.* *p. 9.*
3. *hemisphere (hem'ə sfir)* . . . . . *One of two halves of a sphere.*
   - *— northern hemisphere* . . . . . *The half of the world north of the equator.* *p. 4.*
   - *— southern hemisphere* . . . . . *The half of the world south of the equator.*
   - *— eastern hemisphere* . . . . . *The half of the world east of the prime meridian (0°).* *p. 5.*
   - *— western hemisphere* . . . . . *The half of the world west of the prime meridian (0°).* *p. 5.*
4. *litchi (lē chē)* . . . . . *A sweet oval fruit grown in the warm climates of China.* *p. 11.*
5. *meridian (mə rid'ē ən)* . . . . . *Line of longitude encircling the globe in a north/south direction.* *p. 5.*
6. *navigable (nav'ə gə bəl)* . . . . . *Wide enough and deep enough to permit passage of ships.* *p. 9.*
7. *parallel (par'ə lel)* . . . . . *Line of latitude encircling the globe in an east/west direction.* *p. 4.*
8. *resource (rē'sōrs)* . . . . . *A usable stock or supply.* *p. 9.*

1.1 Introduction

Imagine you are a geographer studying the People's Republic of China. What do you need to know? First, you would locate China on a world map. Then, you need to find out about China's global position, land size, bordering countries, coastal waters, and coastal islands. These topics are explained in this chapter.

As a geographer living in the United States of America, you will also be curious to know how **China's territory compares with that of your country.** As you read, **look for similarities and differences.** For example, how does their land size compare? What ocean do they share?

The questions at the beginning of each topic are your guideposts. Answer these questions by locating the main information in bold type throughout the chapter. Once you know the answers you have mastered the basic facts about China's territory.



1.2 Global Position

- China lies in which hemispheres?
- China is part of which continent?
- What are the comparisons between the global positions of China and the United States?

China and the United States are both in the *northern hemisphere* (Figure 1-1). China lies between the 18°N and 53°N *parallels*. The Tropic of Cancer, at the 23½°N parallel, crosses through China. The United States lies between 25°N and 49°N. The Tropic of Cancer does not pass through the United States.

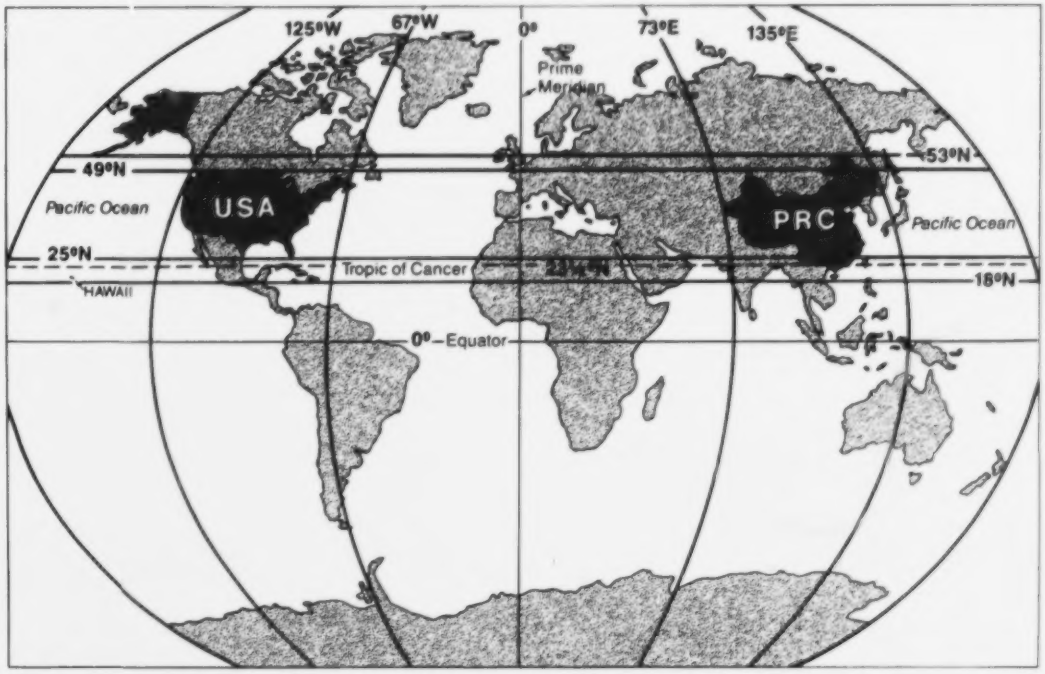


Figure 1-1: World map

parallel (par'ə lel) . . . . . Line of latitude encircling the globe in an east/west direction.

China is almost directly on the other side of the globe from the United States. **China is in the *eastern hemisphere.* The United States is in the *western hemisphere.*** To find each country on the world map, look for China between the 73 °E and 135 °E *meridians,* and the United States between the 67 °W and 115 °W meridians.

China lies in the eastern part of the continent of Asia. This is called East Asia. The United States is part of the continent of North America (Figure 1-1).

hemisphere (hem'ə sfir) . . . . . *One of two halves of a sphere.*

— northern hemisphere . . . . . *The half of the world north of the equator.*

— eastern hemisphere . . . . . *The half of the world east of the prime meridian (0°).*

— western hemisphere . . . . . *The half of the world west of the prime meridian (0°).*

meridian (mə rid'ē ən) . . . . . *Line of longitude encircling the globe in a north/south direction.*

1.3 Land Size

- How big is China compared to the Soviet Union, Canada and the United States?

China is a vast country. **It has the third largest land area in the world** (Figure 1-2). China covers more than three and one-half million square miles. The Soviet Union and Canada are the only two nations with a land size larger than China's. **China and the United States are almost the same size** (Figure 1-3). The land size of China is slightly larger than the land size of the United States.

Rank	Country	Area in square miles	Area in square kilometers
1	Soviet Union	8,601,000	22,276,390
2	Canada	3,851,000	9,974,090
3	People's Republic of China	3,692,000	9,562,280
4	Unites States of America	3,679,000	9,528,610

1 square mile equals 2.59 square kilometers
Reference: RAND McNALLY GOODE'S WORLD ATLAS, 1983.

Figure 1-2: The four largest countries in the world

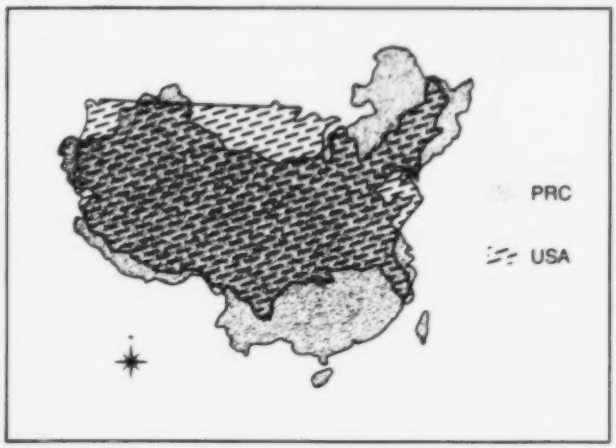


Figure 1-3: Comparison of the size of the People's Republic of China and the United States of America

1.4 Bordering Countries

- How many sides of China are bordered by countries?
- Where are the Soviet Union, India, Vietnam, and North Korea in relation to China?
- What is the comparison in the number of bordering countries of China and the United States?
- What is the comparison between the locations of the bordering countries of China and the United States?

North	South	East	West
• Soviet Union	• Vietnam	• North Korea	• India
• Mongolia	• Laos		• Bhutan
	• Burma		• Nepal
			• Pakistan
			• Afghanistan

Figure 1-4: China's bordering countries

China has bordering countries on all four sides. There are 11 countries in all (Figure 1-4 and 1-5). Some are often mentioned in the news. Two major countries are the Soviet Union to the north and India to the west. The formal name of the Soviet Union is the Union of Soviet Socialist Republics (USSR). You will also often hear about Vietnam to the south and North Korea to the east.

Some neighboring countries do not touch the border of China. Japan is close to the east coast. The Philippines, Malaysia, and Indonesia are located southeast of China.

The mainland of the United States has bordering countries on just two sides. Canada lies to the north and Mexico is to the south (Figure 1-1).

Figure 1-5: China's territory

1.5 Coastal Waters

- Which major bodies of water touch China's coast?
- What are the comparisons between the coasts and the coastal waters of China and the United States?

Only the Pacific Ocean touches China's shore (Figure 1-5). **China has one coast — an east coast.** It stretches along the eastern and southeastern border of China. The waters off this coast lie over the *continental shelf*. China's continental shelf is rich in fish and may hold large amounts of oil and natural gas.

At China's coast, the Pacific Ocean is divided into three major seas. The Yellow Sea is to the north. The South China Sea is to the south. The East China Sea lies in between. The seas are *navigable* by large ships. They are major fishing areas. The South China Sea is very valuable as a shipping lane to China's major world trading partners.

The United States has two coasts — an east coast and a west coast. The east coast is bordered by the Atlantic Ocean and the Gulf of Mexico. This coast runs along the eastern and southeastern coastline, like China's east coast.

The west coast is bordered by the Pacific Ocean. The continental shelf is rich in some of the same *resources* found in China's continental shelf. **The United States and China are two of many countries that share the Pacific Ocean** (Figure 1-1).

continental shelf
(kon'tə nen'tl shelf) . . . . . *An area of shallow water next to a continent.*

navigable (nav'ə gə bəl) . . . . . *Wide enough and deep enough to permit passage of ships.*

resource (rē'sôrs) . . . . . *A usable stock or supply.*

1.6 Coastal Islands

- What are the names of China's two largest islands?
- Why is Hainan important to China?
- What does Hainan have in common with Hawaii?

China has thousands of coastal islands. In fact there are over 5,000 islands dotting the seas off China's coast. Almost all of these are less than one-half square mile in area. Some are made of rock and others of soil deposits. The coral reefs, a third type of island, are made up of crusty bodies of small sea animals.

Taiwan is the largest Chinese island. While Taiwan is a part of China, it does not have the same form of government. It lies between the East China Sea and the South China Sea (Figure 1-5). Taiwan used to be called Formosa by people from other countries. The Tropic of Cancer cuts Taiwan in half. This oval island is about the same size as the states of Maryland and Delaware put together (about 13,900 square miles or 36,000 sq. km.). Taiwan is covered with mountains, plains, rivers and lakes. The mountains are on the eastern side. The plains, which contain fertile farm land, lie to the west.

Hainan is the second largest island. It lies in the South China Sea (Figure 1-5). In fact, Hainan means "south sea". It is separated from China's mainland by a strip of water called Qiongzhou Strait.

Most of Hainan (65%) is coastal plain. The rest is thickly forested mountains and hills. Palm trees line its beaches (Figure 1-6). Hainan is rich in forest, animal and mineral resources. Rare and valuable animals such as beavers and peacocks live on this island.

Hainan is important to China for its tropical products. Fruits such as bananas, pineapples and *litchis* are grown on Hainan. Other crops include rice, coffee and peppers. The tea grown here is known all over the world for its fragrance and color. All these crops grow well because there is plenty of rain, and the sun warms the rich soil most of the year.

Figure 1-6: Hainan island, Guangdong province, China

A major industry on Hainan is the processing of food crops. Some of the other products made by island industries include machinery, cement, plastic goods and electronics. Textiles are also made here. Hainan's colorful *brocades* have been famous for more than 600 years.

The United States also has thousands of coastal islands. One of these islands, **Hawaii, has at least three things in common with Hainan.** First, both are on the same latitude — 19°N. Second, both lie in the Pacific Ocean. Third, both are important to the economy of their countries. Hawaii's major industries are tourism, farming, and processing its tropical crops. Two of the main crops are pineapples and sugar cane.

litchi (lē chē) . . . . . *A sweet oval fruit grown in the warm climates of China.*

brocade (brō kād') . . . . . *A cloth with a raised design woven into it.*

1.7 Summary

As a geographer, you now know about China's territory. You also can compare the territories of the People's Republic of China and the United States of America. First, China and the United States are both in the northern hemisphere. China is also in the eastern hemisphere. The United States is in the western hemisphere. Second, China is about the same size as the United States. Third, China has many bordering countries that surround most of its territory. The United States has only two bordering countries that touch two sides. Fourth, China has only one coast — an east coast. The United States has two coasts — an east coast and a west coast. China and the United States share the Pacific Ocean. Fifth, China and the United States have many coastal islands. Hainan has several similarities with Hawaii.

2
行政單位
Governing Units

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Vocabulary and Definitions

1. *acupuncture (ak'yù pungk'cher)* ..... *A Chinese medical practice that attempts to cure illness or reduce pain by inserting needles into specific parts of the body. p. 32.*

2. *archeological (är'kē ə loj'ik əl)* ..... *Relating to the study of ancient times and ancient people, conducted by digging up the remains of buildings and other relics of human activity. p. 43.*

3. *autonomous (ô ton'ə məs)* ..... *Self rule or self-governing. p. 23.*

4. *autonomous region (ô ton'ə məs rē'jən)* .... *One of three types of governing units in China directly under the central government. This region has a large number of national minority people. p. 23.*

5. *Buddhism (bu'diz əm)* ..... *A religion from India based on the belief that life is suffering. One can strive to relieve this suffering by observing certain Buddist practices. p. 48.*

6. *Chinese Lunar New Year (chī nēz' lü'nər nü yir)* ..... *A celebration that begins on the day of the first new moon of the lunar calendar, sometime between January 21st and February 19th. It is also called "Spring Festival". It is a national three-day holiday. China has also observed the January 1st New Year since 1911. p. 34.*

7. *cuisine (kwi zēn')* ..... *A style of cooking. p. 31.*

8. *dynasty (dī'nə stē)* ..... *A period of rule by a single family. An inherited rule always passed through male members of a family. p. 40.*

9. *endangered species (en dān'jərd spē'shēz)* . . . *A category of animal or plant that is dying to the point of extinction. p. 33.*

10. *Lamaism (lä'məiz'əm)* . . . . . *A form of Buddhism. (See Buddhism). p. 48.*

11. *national minority (nash'ə nəl mi nôr'ə tē)* . . . . . *In China, a group of people with common language, customs and origin that is different from the majority of Chinese. The majority of Chinese are of Han descent (94%). National minorities make up the rest — six per cent (6%). p. 23.*

12. *nomad (nō'mad)* . . . . . *A person who wanders from place to place in search of food and pasture and has no fixed home location. p. 45.*

13. *opera (op'ər ə)* . . . . . *A play in which the actors sing the dialogue. An orchestra accompanies the singers. In China, the actors also perform acrobatic acts. p. 31.*

14. *province (pro'vəns)* . . . . . *One of three types of governing units in China directly under the central government. Provinces make up most of China's governing units. p. 17.*

15. *rural (rur'əl)* . . . . . *Relating to the countryside. p. 21.*

16. *special city (spesh'əl sit'ē)* . . . . . *One of three types of governing units in China directly under the cental government. It is a major industrial area. p. 21.*

17. *surburban (sə bėr'bən)* . . . . . *Relating to the land surrounding the city. p. 21.*

18. *urban (ėr'bən)* . . . . . *Relating to the city. p. 21.*

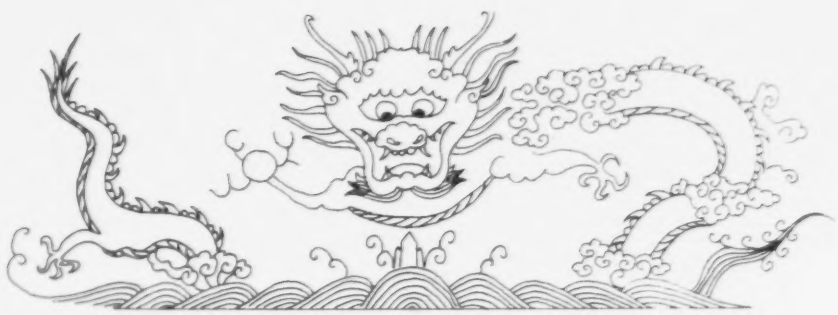
19. *westerners (wes'tər nərs)* . . . . . *Referring to Europeans and Americans. p. 28.*

2.1 Introduction

As a geographer, you need to know about a country's governing units. First, consider the United States of America. What does its name mean? It tells you that many states are united to form one country. China's official name is "The People's Republic of China." It is also made up of many governing units. In both China and America, the major governing units are part of a national government. In China, the national government is called the central government. In America, it is called the federal government. As you read, look for the **similarities and differences between the governing units of China and the United States.** For example, what governing unit of China is most like Washington, D.C.?

In this chapter, you will find out about China's three types of major governing units. Next, you will learn about three geographic regions in China. Finally, you are going to study the special features of seven governing units.

The questions at the beginning of each topic are your guideposts. Answer these questions by locating the main information in bold type throughout the chapter. Once you know the answers you have mastered the basic facts about China's governing units.



2.2 Background

- What are the names of China's three types of governing units?
- What are the differences between the governing units of China and the United States?

Most countries are divided into smaller governing units. China has three types of governing units directly under the central government. They are the province, the special city, and the autonomous region. There are a total of 29 Chinese governing units (Figure 2-1). **The United States has one type of governing unit directly under the federal government. It is called the state.** There are 50 American states.

A. Provinces

- What are provinces?
- Where are the provinces located?
- How do China's provinces compare with American states?

Most of China's governing units are *provinces.* They are somewhat like American states. They both have capital cities. For example, in China, Xi'an is the capital of Shaanxi province.

There are 22 provinces in China (Figures 2-2 and 2-3). **They cover most of the eastern half of China** (Figure 2-3). The land size of provinces vary. Qinghai, China's largest province, is slightly larger than Texas (267,000 sq. miles or 691,000 sq. km.). Zhejiang, China's smallest province, is about the size of Kentucky (39,500 sq. miles or 102,000 sq. km.).

province (pro'vəns) . . . . . *One of three types of governing units in China directly under the central government. Provinces make up most of China's governing units.*

Figure 2-1: China's governing units

Province	Capital	Area[1] (sq. miles)	Area (sq. k.)
Anhui	Hefei	54,000	140,000
[illegible]	[illegible]	[illegible]	[illegible]
Gansu	Lanzhou	142,000	367,000
[illegible]	[illegible]	[illegible]	[illegible]
Guizhou	Guiyang	67,000	173,000
[illegible]	[illegible]	[illegible]	[illegible]
Heilongjiang	Harbin	179,000	464,000
[illegible]	[illegible]	[illegible]	[illegible]
Hubei	Wuhan	72,000	187,000
[illegible]	[illegible]	[illegible]	[illegible]
Jiangsu	Nanjing	40,000	104,000
[illegible]	[illegible]	[illegible]	[illegible]
Jilin	Changchun	72,000	187,000
[illegible]	[illegible]	[illegible]	[illegible]
Qinghai	Xining	280,000	725,000
[illegible]	[illegible]	[illegible]	[illegible]
Shandong	Jinan	60,000	155,000
[illegible]	[illegible]	[illegible]	[illegible]
Sichuan	Chengdu	220,000	570,000
[illegible]	[illegible]	[illegible]	[illegible]
Yunnan	Kunming	168,000	435,000
[illegible]	[illegible]	39,000	101,000

1 sq. mile = 2.59 sq. kilometers

References: 1 — Goldstein, Sears, and Bush, THE PEOPLE'S REPUBLIC OF CHINA: A BASIC HANDBOOK, 1984. (1980 estimates)

2 — THE WORLD ALMANAC AND BOOK OF FACTS, 1985. (1982 estimate)

Figure 2-2: China's provinces

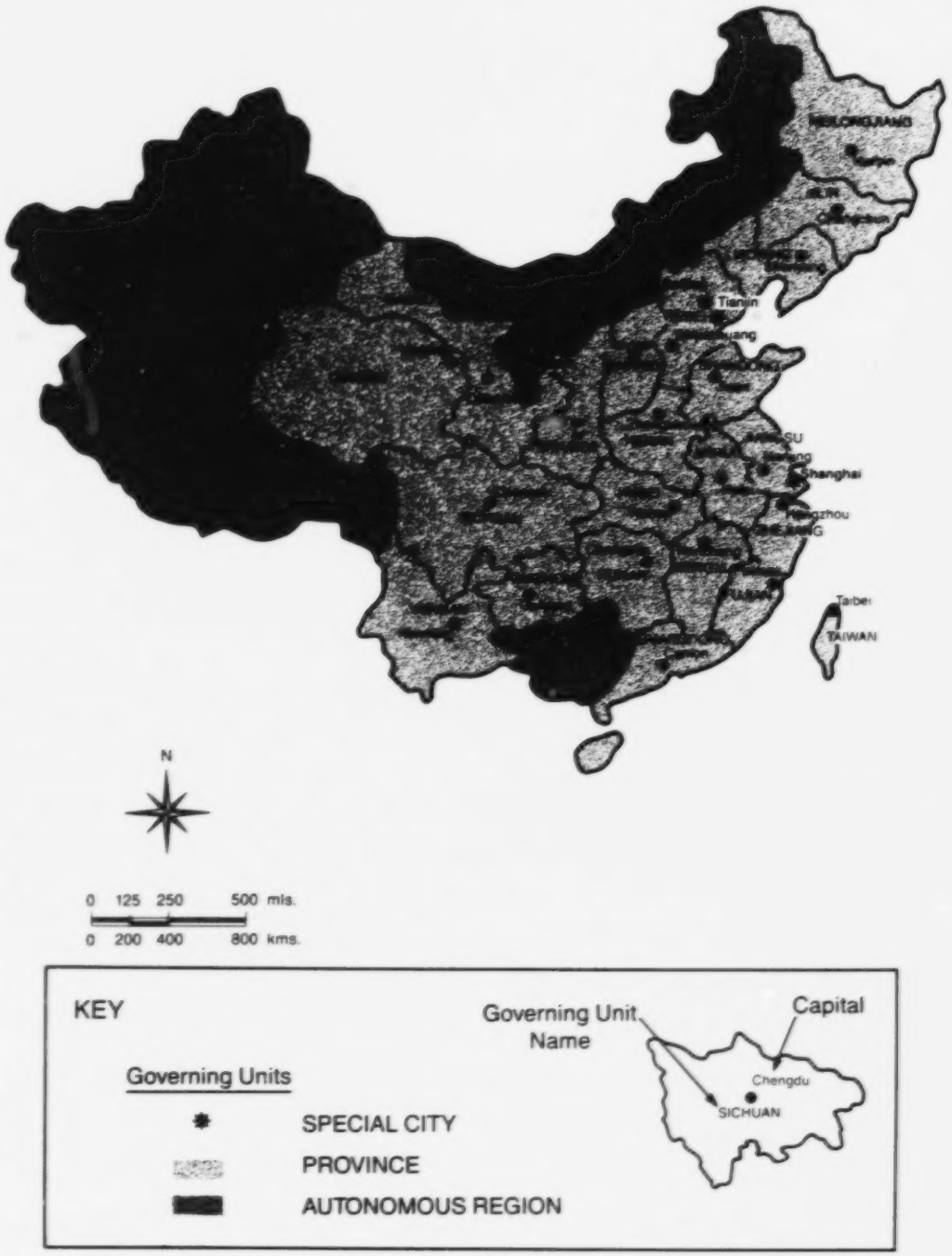


Figure 2-3: China's provinces, special cities and autonomous regions

B. Special Cities

- What are special cities?
- What are the names of China's three special cities?
- Where are the special cities located?
- How do China's special cities compare with American cities?

***Special cities* are major industrial areas.** They have such economic importance to China that they were given the same status as the provinces and the autonomous regions. Special cities are like New York City, Los Angeles, and Chicago. In other texts these special cities are called "municipalities", or "special municipalities".

There are three special cities in China. They are Beijing, Shanghai, and Tianjin (Figures 2-3, 2-4). **They are located in eastern China, on or near the coast.**

The special cities have smaller sizes than the other governing units (Figure 2-4). Beijing, the largest special city, is a little larger than the state of Hawaii (6,450 sq. miles or 16,700 sq. km.). Tianjin, the smallest governing unit in terms of land size, is a little smaller than the state of Rhode Island (1,214 sq. miles or 3,144 sq. km.). Like many American cities, their territory includes an *urban* core with surrounding *suburban* and *rural* areas.

special city (spesh'əl sit'ē) . . . . . *One of three types of governing units in China directly under the cental government. It is a major industrial area.*

urban (er'bən) . . . . . *Relating to the city.*

surburban (sə ber'bən) . . . . . *Relating to the land surrounding the city.*

rural (rur'el) . . . . . *Relating to the countryside.*

Special City	Area (sq. m.)	Area (sq k.)
Beijing	7,000	18,000
Shanghai	2,000	5,000
Tianjin	1,000	2,500

Reference: See Figure 2-2

Figure 2-4: China's special cities

Autonomous Region	Capital	Area (sq. m.)	Area (sq. k.)
Guangxi	Nanning	91,000	236,000
Inner Mongolia	Hohhot	457,000	1,184,000
Ningxia	Yinchuan	25,000	65,000
Tibet	Lhasa	470,000	1,217,000
Xinjiang	Urumqi	640,000	1,658,000

Reference: See Figure 2-2

Figure 2-5: China's autonomous regions

C. Autonomous Regions

- What are autonomous regions?
- What are the names of China's five autonomous regions?
- Where are the autonomous regions located?
- What are the comparisons between China's autonomous regions and American states?

***Autonomous regions* have more *autonomy* than provinces or special cities. That is because large numbers of *national minority* people live in these regions.** The central government makes special provisions in the laws and policies of these regions. It encourages the minority people to retain and practice many of their own customs. For example, national minorities are allowed to speak their native language as their first language. The Chinese national language, called the common language, is also taught in their schools.

There are five autonomous regions in China. They are Guangxi, Inner Mongolia, Ningxia, Tibet, and Xinjiang (Figures 2-3, 2-5). **They lie on the outer edge of China** (Figure 2-3). **Most are in western China.** Like American states, autonomous regions have capitals. For example, Lhasa is the capital of Tibet.

Inner Mongolia, Tibet and Xinjiang are the three largest of all the governing units (Figure 2-5). In fact, Xinjiang, the largest, covers one-sixth (16%) of China's land size. Xinjiang's land size equals that of Alaska (586,000 sq. miles or 1,517,700 sq. km.) and New York (49,500 sq. miles or 128,200 sq. km.). Ningxia, the smallest autonomous region, is about the size of West Virginia (24,000 sq. miles or 62,160 sq. km.).

autonomous (ô ton'ə məs) . . . . . *Self rule or self-governing.*

autonomous region (ô ton'ə məs rē'jən) . . . . *One of three types of governing units in China directly under the central government. This region has a large number of national minority people.*

national minority (nash'ə nəl mi nôr'ə tē) . . *In China, a group of people with common language, customs and origin that is different from the majority of Chinese. The majority of Chinese are of Han descent (94%). National minorities make up the rest — six per cent (6%).*

2.3 Geographic Regions

- What are the names of the three major Geographic Regions of China?
- Where are these geographic regions located?

This book divides China into three major Geographic Regions to make it easier to study. They are: South China (margin symbol is an Ⓢ); **North China** (margin symbol is an Ⓝ); and **West China** (margin symbol is a Ⓦ) (Figure 2-6).

South China covers the southeast and south central parts of the country. North China covers the northeast and north central parts of the country. West China covers most of the western half of the country as well as Inner Mongolia.

The easiest way to remember their boundaries is to think of two lines dividing China (Figure 2-1 on page 18). The first line is a diagonal line from northeast (in Heilongjiang) to southwest (in Yunnan). All the territory west of this line is West China. The second line is a horizontal line from north of Shanghai to north of Chengdu, capital of Sichuan. North of this line is North China. South of this line is South China.

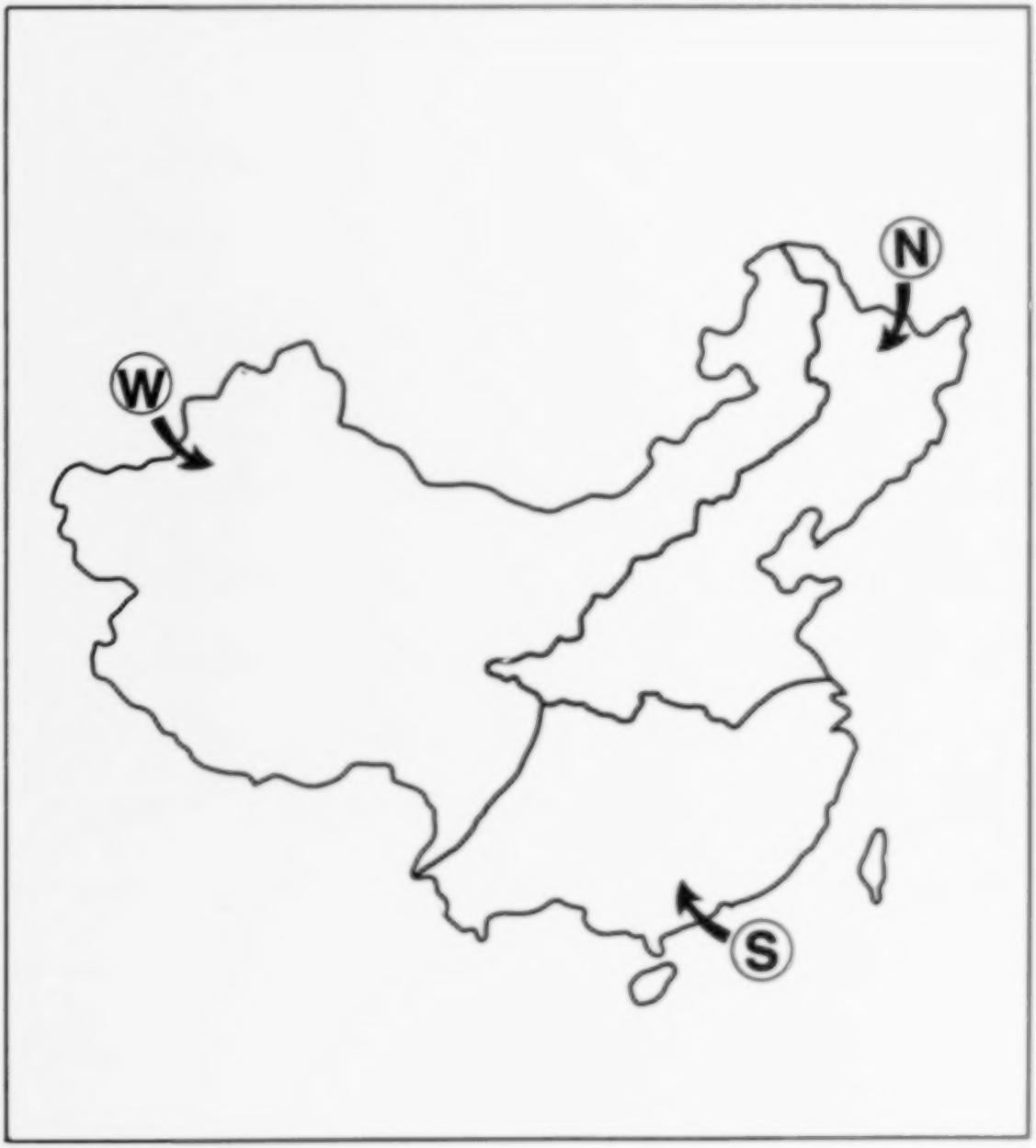


Figure 2-6: China's Geographic Regions

2.4 Focus Units

- What are the names of the seven Focus Units?
- What type of governing unit is each Focus Unit?
- In which of the Geographic Regions is each Focus Unit located?

In this book, seven governing units are studied in depth (Figure 2-7). **They are called Focus Units.** They were selected because they are often in world news and are popular places to visit. **These Focus Units have special features like any governing unit throughout the world. The seven Focus Units are Beijing, Guangdong, Shaanxi, Shanghai, Sichuan, Tibet and Xinjiang.** The Focus Units are arranged in this chapter by Geographic Regions.

Figure 2-7: China's Focus Units

2.5 South China's Focus Units

- Where are Guangdong, Shanghai, and Sichuan located?
- What are the capitals of Guangdong and Sichuan?
- What are the special features of Guangdong, Shangai, and Sichuan?

Three Focus Units are located in South China, (Figure 2-8). **Guangdong and Sichuan are provinces. Shanghai is a special city.**

A. Guangdong

Guangdong borders the South China Sea. It is the most southern governing unit in China. (Figures 2-7 and 2-8). **Canton, its capital,** is located at 23°N and 113°E. Canton's Chinese name is Guangzhou. Canton is almost on the same latitude as Miami Beach, Florida (26°N). Hainan Island, described in Chapter 1 on page 10 is part of this province.

Canton is a major trading port in southeast China. The first American ship entered the port of Canton over 200 years ago when the "Empress of China" docked there in 1784. At that time, China was called "Cathay" by *westerners*. This word brings forth romantic images of an exotic land overflowing with riches. Ship captains and merchants risked their lives and fortunes to take their goods to China and bring Chinese goods home. Americans loved the green and black teas, brightly colored silks, and porcelain dishes decorated in blue and white or in many colors. The Chinese invented porcelain, commonly called "china" today.

westerners (wes'tər nərs) ..... *Referring to Europeans and Americans.*

Figure 2-8: South China's governing units

In keeping with tradition, the **International Canton Trade Fair is held twice a year, in the Spring and Fall.** Since 1957, this fair has attracted foreign business people from all over the world. As many as 25,000 people trade with China at each fair (Figure 2-9). The Trade Fair gives the Chinese a chance to display their goods for foreign buyers.

Figure 2-9: Trade Fair, Spring, 1984, Canton, Guangdong, China

One of the most popular pastimes in China is eating. The Chinese place a lot of value in the pleasing appearance of their dishes. For example, carved vegetables look like miniature animals and flowers. This tradition is found in many Chinese restaurants in America.

Cantonese *cuisine* has the greatest variety of fresh vegetables, seafood, and fruits of any regional cuisine. Cantonese cuisine is one of the five best known types of Chinese regional cooking throughout the world. The other four are Beijing, Mongolian, Shanghai, and Sichuan-Hunan.

In America, Cantonese cuisine is probably the most well-known of all the types of Chinese regional cooking. Almost every major American city has a Cantonese restaurant. Egg rolls, fried noodles (what we now call "chow mein"), pastries, dumplings, and whole steamed fish come from Canton.

Canton has many attractions. Tourists traveling to Canton today would probably visit a zoo, monuments, museums and parks. The Culture Park, spread over 20 acres, has many attractions. There are exhibit halls, flower gardens, an aquarium, an *opera* house, a concert hall, and a tea house. Three huge television screens are set up for public viewing. Also there is a rink for roller skating and places to play table tennis.

B. Shanghai

Shanghai is China's most important port. This port is on the Huangpu River very near the east coast, next to the Yellow Sea (Figures 2-7 on page 27 and 2-8). Shanghai means "to the sea". It is located at 31°N and 121°E. Dallas, Texas, at 30°N, is close to the same latitude.

cuisine (kwi zen') . . . . . *A style of cooking.*

opera (op'ər ə) . . . . . *A play in which the actors sing the dialogue. An orchestra accompanies the singers. In China, the actors also perform acrobatic acts.*

Figure 2-10: Waterfront building on Huangpu River, Shanghai, China

Shanghai is also China's center for foreign trade. It is considered the most westernized of all Chinese cities. Since the late 1800's, Shanghai has been China's major gateway to foreign traders (Figure 2-10). City life in Shanghai has been compared to that of New York City or Rome.

On Nanjing Road, the main commerical street in downtown Shanghai, billboards display goods from all over the world. One example of a western product especially popular with Shanghai's brides is the white wedding dress. This a quite a change from the traditional Chinese red bridal robe.

Shanghai is second only to Beijing in cultural offerings. Performing troupes put on programs in ballet, opera, puppetry, and acrobatics. There are also circus acts.

acupuncture (ak'yú pungk'cher) . . . . . *A Chinese medical practice that attempts to cure illness or reduce pain by inserting needles into specific parts of the body.*

Others come to Shanghai for medical treatment. Shanghai's medical institutions are in the forefront of cancer research. The world-famous No. 6 Hospital is also noted for reattaching severed limbs. Other hospitals train both Chinese and foreign doctors in *acupuncture* methods.

Shanghai has over 600 restaurants. This city's cuisine is known for its "red" cooking method that produces delicate flavors. The flavors come from food cooked slowly in a heavy red sauce made of soy sauce, wine, and sugar.

Shanghai is a major tourist city. Many come to shop, sight-see, or enjoy a cultural performance. Popular places for people to stroll and meet are the parks along the waterfront. Another popular form of leisure is a boat ride on the Huangpu River.

C. Sichuan

Sichuan is in south central China (Figures 2-7 on page 27 and 2-8). Chengdu, its capital, is located at 31°N and 104°E. Chengdu is almost on the same latitude as Houston, Texas (30°N). In this book the eastern part of Sichuan is the Focus Unit (Figure 2-7).

Sichuan is the home of the Giant Panda. Most of the remaining 1,000 pandas in China live on special reserves within Sichuan. Today, the panda is considered an *endangered species*. This has happended because the pandas have only one source of food, the arrow bamboo plant. These plants are now in the dying phase of their 60-year lifecycle. Consequently, many pandas are starving to death. World organizations, such as the World Wildlife Fund, are contributing money and sending specialists to help save the pandas. Two pandas live in the National Zoo in Washington, D.C. They were a gift to the American people from the Chinese government in 1972.

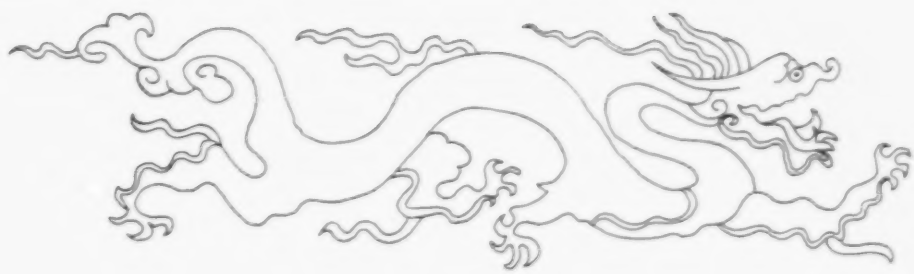
endangered species (en dān'jərd spē'shēz) . . . A category of animal or plant that is dying to the point of extinction.

Chengdu is a city of bamboo. Since bamboo grows locally, it is used for many purposes. Bamboo baskets and crafts are on sale everywhere.

Sichuan is also know for its hot and spicy cuisine. Other dishes have flavors from herbs and flower petals. For example, fish in red chili sauce and soft fried lotus flower dishes are served.

One event visitors are sure to attend in Chengdu is the opera. Chinese opera performers wear colorful costumes and put a lot of makeup on their faces. The traditional opera usually includes dancing and tumbling, along with the music.

The annual *Chinese Lunar New Year* Celebration is another popular event in many of China's cities, including Chengdu. It begins on a day between mid-January and mid-February. It ends with the Lantern Festival. During the festival, over 20,000 paper lantern shapes, such as animals, birds and flowers, are hung throughout Chengdu.



Chinese Lunar New Year
(chī nēz' lü'nər nü yir) . . . . . *A celebration that begins on the day of the first new moon of the lunar calendar, sometime between January 21st and February 19th. It is also called "Spring Festival". It is a national three-day holiday. China has also observed the January 1st New Year since 1911.*

2.6 North China's Focus Units

- Where are Beijing and Shaanxi located?
- What is the name of the capital of Shaanxi?
- What are the special features of Beijing and Shaanxi?

Two Focus Units are located in North China (Figure 2-11). **Beijing is a special city. Shaanxi is a province.**

A. Beijing

Beijing is the most important political and cultural center in China. It is located near the east coast, close to the Yellow Sea, at 40°N and 116°E (Figure 2-7 on page 27). Beijing is almost on the same latitude as Washington, D.C. (39°N).

Beijing is the national capital, like Washington, D.C. Beijing means "northern capital". It has been China's capital for most of the time since 1115. This is close to 900 years. All clocks in China are set to Beijing time.

In addition, Beijing is the major location for publishing, broadcasting, finance, literature, and the arts. In that respect it is like New York City. The Beijing Library is the largest library in China. Beijing is also the foremost science center of the country.

Beijing cuisine is noted for the famous dish called Beijing Duck. Preparing Beijing (or Peking) Duck is a complicated and long process. The whole duck is coated with honey and pumped with air. Then it is hung up to dry for as long as 48 hours. Next it is slowly roasted over special wood until it is golden brown and crisp. The tasty crisp skin is the most popular part. Northern cuisine is also noted for its steamed dumplings. Beijing's 400 restaurants represent all the regional cooking of China.

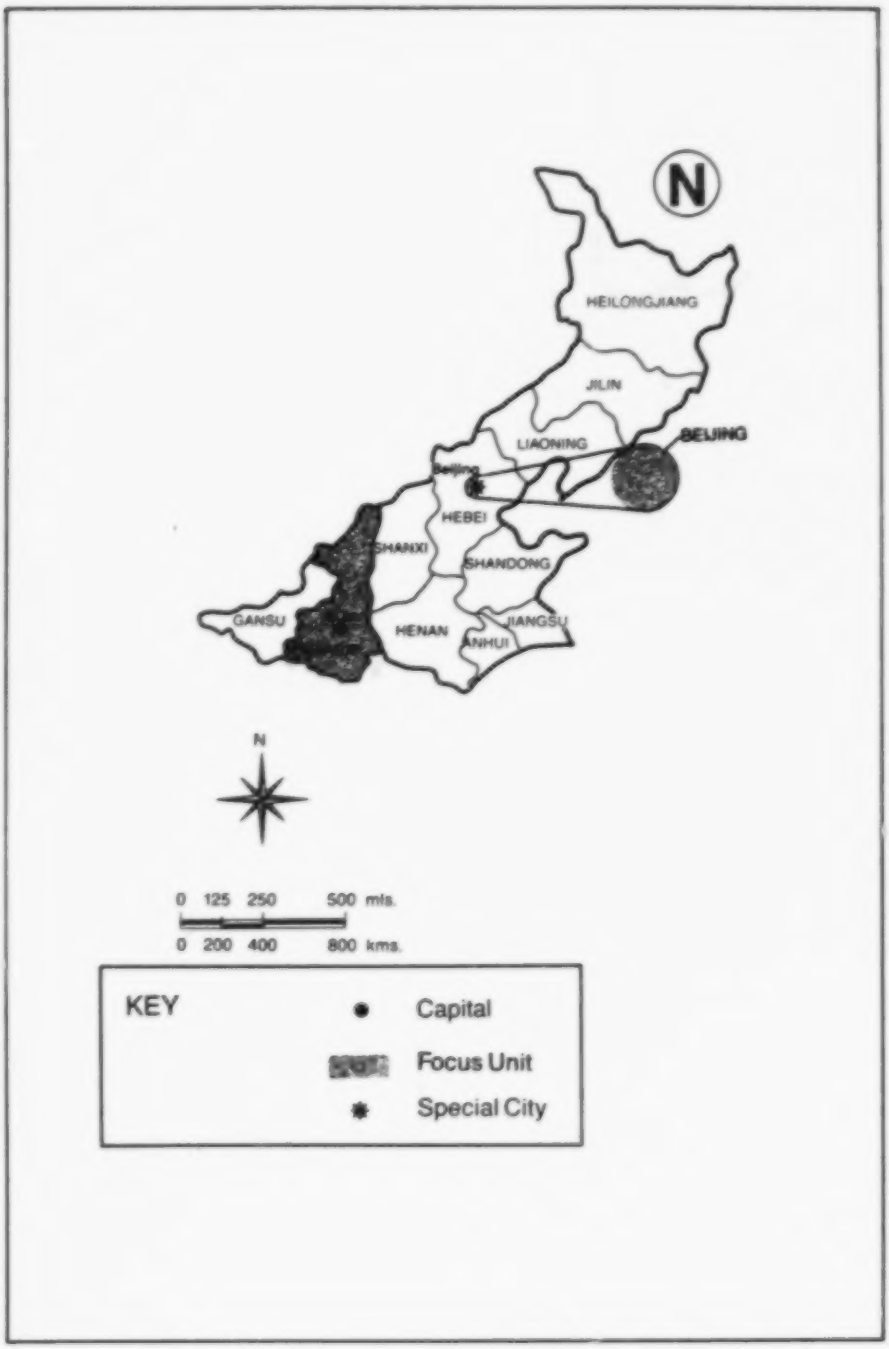


Figure 2-11: North China's governing units

Thousands of tourists, Chinese and foreigners alike, visit Beijing yearly to see the many famous monuments and historical buildings. They include the Imperial Palace, the Temple of Heaven, the Summer Palace, the Great Wall, the Avenue of Animals, the Ming Tombs, Tian'anmen Square, and the Great Hall of the People.

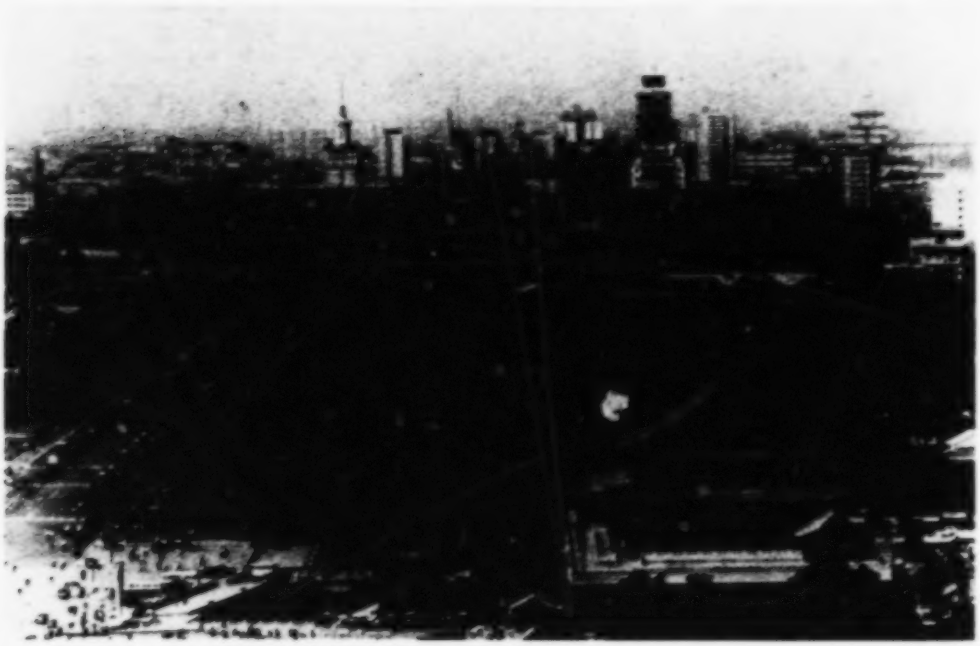


Figure 2-12: Imperial Palace in foreground, Beijing, China

1. Imperial Palace

The Imperial Palace is the most famous symbol of the traditional way of life of emperors (Figure 2-12). It is located in the center of Beijing. It was originally built in the 15th century. In the 17th and 19th centuries changes were made to it. Twenty-four emperors lived there with their families, government officals and thousands of servants and artisans.

The Palace complex is enormous. It overs 200 acres that are surrounded by a moat and high wall. The many buildings contain 9,000 rooms. There are also many courtyards. The buildings are topped with yellow roof tiles and supported by red columns. The color yellow was the symbol of the emperor. At certain times in Chinese history, only the emperor was allowed to wear yellow clothes. Red is the symbol of happiness in China.

The last emperor remained in the Palace until the 1920's. Today, the Imperial Palace is a museum, always crowded with visitors. This is a great change from the days when the Imperial Palace was called the "Forbidden City". Then, only officials and people with special permits were allowed to enter. Now, the Imperial Palace is open to everyone.

2. Temple of Heaven

The Temple of Heaven is where the emperor performed rituals. It dates from the 15th century. While an emperor was in power, he would leave the Imperial Palace to visit the Temple once a year. His trip was a solemn procession. All the streets were made silent and no one was allowed to look at China's ruler as he went past.

At the Temple he asked the gods for good harvests. This duty was important because the great majority of the Chinese were farmers. In fact, the emperor was the only person thought worthy of this task. He was called the "Son of Heaven".

The Temple of Heaven is circular. Its roof is covered with thousands of brilliant blue tiles that shimmer in the sun. Its wood frame is held together only by wooden pegs.

3. Summer Palace

Many emperors moved their residence to the Summer Palace during the summer months. They did this to escape the heat of downtown Beijing. Although it is only seven miles (11k.) from the Imperial Palace, the grounds of the Summer Palace are three times as large (692 acres). There is a lake for swimming and boating. In the winter, skaters can be seen gliding across the lake.

The Summer Palace was largely rebuilt by the Dowager Empress Ci Xi, who ruled from 1835 to 1908. Like many rulers before her, she used public money lavishly for her own pleasure. The money with which she remodeled the Summer Palace had been intended to build a new navy. One example of her extravagance was the marble boat she had carved for her use. Today, it sits on the lake's edge as a reminder of her rule.

4. The Great Wall

The Great Wall is a Chinese national monument. Almost everyone who visits Beijing goes to walk on the Great Wall. They are drawn by its massive size and length. The average height and width of the Wall is 23 feet (7 m.). The Great Wall was originally built to be wide enough for five cavalrymen or 10 footsoliders to march along side by side. Sections of it wind across China for more than 1,500 miles (935 k.) from the Yellow Sea to Western Gansu province.

There are many stories and legends about the Great Wall, but the true story is not well-known. Some popular myths are just not true. For example, many people believe that you can see the Wall from the moon! That is not true.

It is often stated that the Great Wall was begun more than 2,000 years ago. That is partly true. The defense line called the "Great Wall" today was reconstructed by the Ming *dynasty* about 400 years ago. Much of this wall was built on foundations of walls dating from the fifth century B.C. These walls were joined together by Emperor Shi Huang. The Great Wall's purpose was to protect China's territory in the north from northern invaders.

The section of the Wall visited by most people today is about 40 miles (25 k.) northwest of Beijing at Badaling (Figure 2-13). It was built to guard the important pass that connected Beijing with the land to the north.

Figure 2-13: The Great Wall at Badaling, Beijing, China

dynasty (dī'nə stē) . . . . . *A period of rule by a single family. An inherited rule always passed through male members of a family.*

5. Avenue of Animals and the Ming Tombs

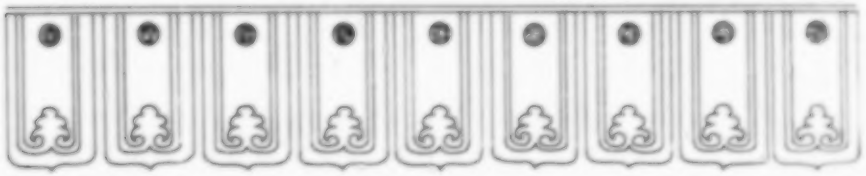
The Avenue of Animals was the road used only to carry the emperors' bodies to their tombs. This road, lined with huge stone animal statues, lies near the Great Wall in Beijing. There are pairs of camels, elephants, lions, horses, and imaginary beasts. One of the animals in each pair stands while the other sits. Some are over 8 feet tall (2.5 m.)

Thirteen emperors of the famous Ming dynasty are buried in the nearby valley. The emperors, believing they had to make preprations for an afterlife, built lavish tombs. The chambers of the tombs are lined with marble, and contain the jewels and other valuable objects that were buried with the bodies.

Today tourists can enter the tombs of Ding Ling and Chang Ling. Ding Ling's tomb rests four stories below ground and consists of three chambers. He was buried with his two wives in 1620. Some of the objects buried with him are on view in the exhibit halls above ground near the tomb's entrance.

6. Tian'anmen Square

Tian'anmen Square is the largest public square in the world. Its paved area covers 100 acres. At some gatherings this square has held a million people. It is surrounded by many government buildings. To the north is the gate to the Imperial Palace. Government officials usually greet the Chinese people at the north gate.



7. Great Hall of the People

Another imposing building that faces Tian'anmen Square is the Great Hall of the People, built in 1958. Its assembly room holds up to 10,000 people. **The National People's Congress meets here to pass laws.** The congress is made up of elected representatives from all over China. **The Great Hall of the People is also used by the Chinese government to entertain foreign guests.** Richard M. Nixon, the first American president to visit China, was entertained here in 1972.

Figure 2-14 Chariot horses in vault guarding tomb of Emperor Shi Huang, Xi'an, Shaanxi, China

B. Shaanxi

Shaanxi is located in north central China (Figures 2-7 on page 27 and 2-11). **Xi'an, its capital,** is located at 34°N and 109°E. Atlanta, Georgia, is also at 34°N latitude.

Tourists come to Shaanxi to see China's *archeological* sites. They usually go to Xi'an to visit the tomb figures of Emperor Shi Huang. Shi Huang was the first emperor to unite China politically. This is why he is called the "First Emperor" of China. He founded the Qin dynasty in 221 B.C. Qin (pronounced like chin) is the first word which gave China its name.

What is remarkable about the First Emperor's tomb is the "clay army" discovered there by accident in 1974 (Figure 2-14). Some farmers were digging a well and uncovered an underground vault. This vault contained 8,000 life-sized clay statues of warriors, servants, horses, and chariots. Two years later, two more vaults were uncovered that contained another 2,000 figures. The Emperor believed that these clay representatives of life on earth would be useful to him in his afterlife.

archeological (ärˈkē ə lojˈə kəl) ..... *Relating to the study of ancient times and ancient people, conducted by digging up the remains of buildings and other relics of human activity.*

Xi'an was probably the largest city in the world around 900 A.D. It was China's capital during 13 dynasties, including some of the most famous — Qin (221 - 206 B.C.), Han (206 B.C. - 220 A.D.), and Tang (618 - 907). At that time this city was called Chang'an. The Han and Tang dynasties are thought by many to have been the golden ages of the Chinese empire. They were noted for their strong government, commerce, art, music, literature and scholarship.

China's archeological finds help tell the story of its long history. In fact, China is the longest continuous civilization in the world. From its civilization came many inventions. Four of these inventions advanced the progress of human-kind. **They are the compass, gunpowder, papermaking and printing.**

2.7 West China Focus Units

- Where are Xinjiang and Tibet located?
- What are the names of the capitals of Xinjiang and Tibet?
- What are the special features of Xinjiang and Tibet?

There are two Focus Units in West China (Figure 2-15). **They are Xinjiang and Tibet. Both are autonomous regions.**

A. Xinjiang

Xinjiang lies in the northwest corner of China (Figures 2-7 on page 27 and 2-15). **Its border with the Soviet Union makes its location an important defense position. Urumqi, its capital,** is located at 44°N and 88°E. Boston, Massachusetts, at 42°N, is almost on the same latitude.

Twelve of China's 55 national minorities live in Xinjiang. About half of the national minorities' population is Uygurs. They are mostly *nomads*. The Uygurs came from Central Asia before moving to Xinjiang.

Tourists visting Urumqi might want to try riding a camel or spending the night in a Uygur tent (Figure 2-16). Tours of one of the famed local carpet factories show how the colorful rugs are made. Visitors can buy such Uygur products as embroidered caps, leather boots and horn handled knives.

nomad (nō'mad) ..... *A person who wanders from place to place in search of food and pasture and has no fixed home location.*

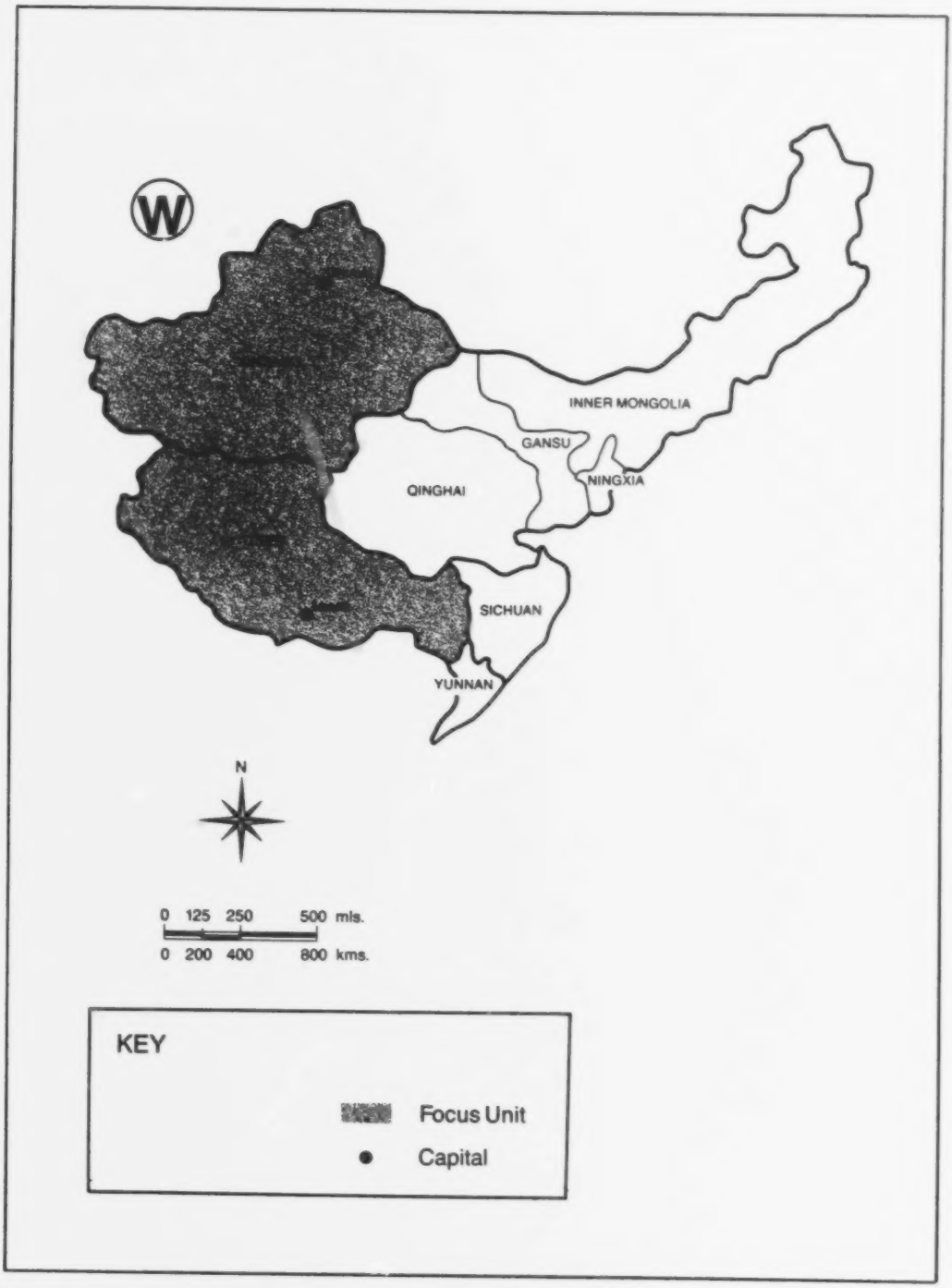


Figure 2-15: West China's governing units

Figure 2-16: Camels in desert, Xinjiang, China

B. Tibet

Tibet is located in the southwest corner of China. Tibet's Chinese name is Xizang (Figures 2-7 on page 27 and 2-15). **Lhasa, Tibet's capital,** is located at 30°N and 91°E. Houston, Texas is on the same latitude. Tibet's territory is twice the size of Texas.

Tibet is the home of the Tibetans, a national minority. Through part of its history, Tibet has been dominated by the Chinese government. Tibet was given autonomous region status in 1965. However, the Tibetans have always tried to preserve a separate political, religious and cultural identity.

Tibetan customs are strongly influenced by a religion called *Lamaism.* Lamaism is a form of *Buddhism* which developed in parts of northern India and Tibet. **The spiritual leader is the Dalai Lama.** Until 1959, the Dalai Lama lived in an imposing fortress in Lhasa. The fortress, called the Potala, is a massive structure of 13 stories and 1,000 rooms. It is now a museum. The Potala, rising high above Lhasa's urban center, dominates it.

Fearing for his life, the Dalai Lama fled from China in 1959 to escape the effects of Chinese communist policies. He went to India to live in exile. These policies were forcefully changing Tibet's traditional way of life.

The Chinese government since 1951 has not encouraged Tibetans to practice their religion. In fact, many of the temples and monasteries were destroyed or turned into public building (Figure 2-17). Today, the government is willing to tolerate the religion which plays such a major role in the Tibetans' daily life. Religious festivals now attract vast numbers of Tibetans.

Buddhism (bü'diz əm) . . . . . *A religion from India based on the belief that life is suffering. One can strive to relieve this suffering by observing certain Buddist practices.*

Lamaism (lä'məiz'əm) . . . . . *A form of Buddhism.*

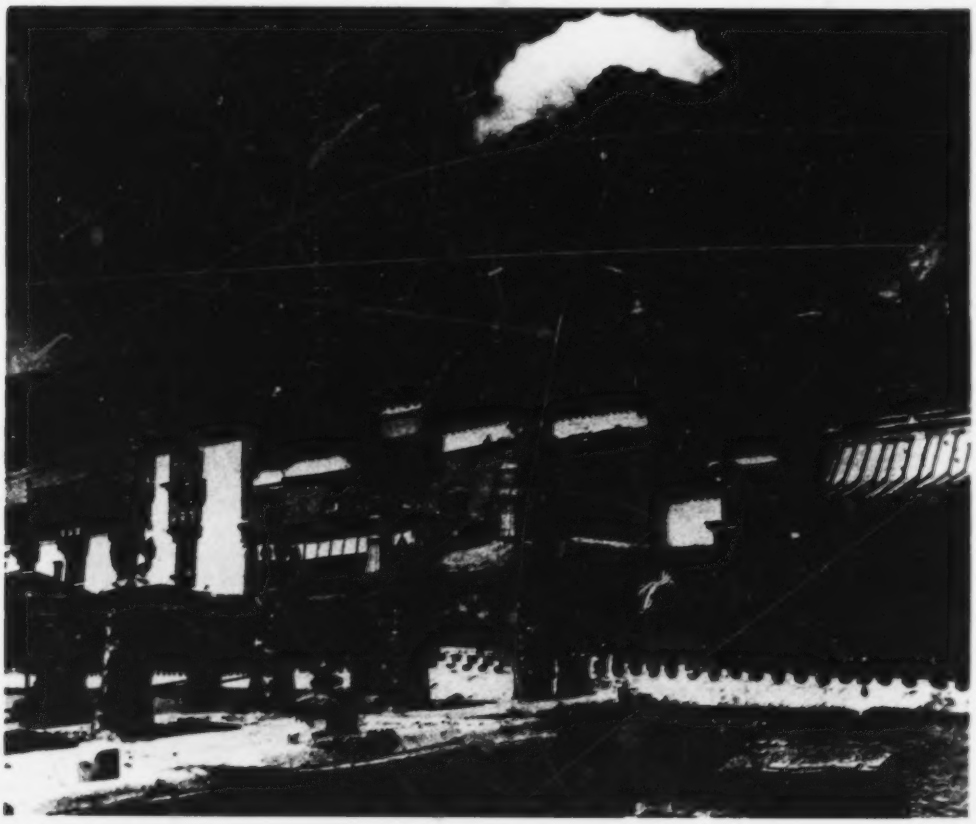


Figure 2-17: Tibetan lama temple, Tibet, China

Visitors to Lhasa would want to spend some time in the Tibetan bazaars. Wool scarves, rugs, wooden bowls and jewelry can be purchased. Also on sale are native clothing with bright geometric patterns and Tibetan boots with upturned, pointed toes and heavy fringe.

2.8 Summary

As a geographer, you now know China's governing units and Geographic Regions. You can also describe the location and special features of the seven Focus Units. Finally, you have learned comparisions between the governing units of China and the United States.

China has three types of governing units directly under the central government — the province, the special city and the autonomous region. It is different in the United States. There is only one type of governing unit directly under the federal government. It is the state.

Most of China's governing units are provinces. There are 22 provinces. They cover most of the eastern half of China.

China's three special cities are major industrial areas. They are Beijing, Shanghai and Tianjin. They are located in eastern China, near or on the coast.

China's five autonomous regions have more autonomy than provinces or special cities. This is because they have large numbers of national minority people. The autonomous regions are Guangxi, Inner Mongolia, Ningxia, Tibet and Xinjiang. They lie on the outer edge of China. Most are in western China.

In this book, China is divided into three Geographic Regions. South China covers the southeast and south central part of the country. North China covers the northeast and north central part of China. West China covers most of the western half of the country as well as Inner Mongolia.

Seven Focus Units are studied in depth throughout this book. These Focus Units have special features like any governing unit throughout the world. The three Focus Units in South China are Guangdong, a province; Shanghai, a special city; and Sichuan, a province. The two Focus Units in North China are Beijing, a special city and Shaanxi, a province. The two Focus Units in West China are Xinjiang and Tibet, both autonomous regions.

Guangdong borders the South China Sea. It is the southernmost governing unit in China. Its captial is Canton. Canton is a major trading port in southeast China. The International Canton Trade Fair is held twice a year, in the Spring and Fall.

Shanghai is China's most important port. Shanghai lies near the east coast and the Yellow Sea. It is also China's center for foreign trade. Shanghai is considered the most westernized of all Chinese cities. It is second only to Beijing in cultural offerings.

Sichuan is in south central China. Its capital is Chengdu. Sichuan is the home of the Giant Panda.

Beijing is the most important political and cultural center in China. It is near the east coast of China, close to the Yellow Sea. It is the national capital, like Washington, D.C. Some of the many famous monuments and historical buildings are the Imperial Palace, the Temple of Heaven, the Summer Palace, the Great Wall, the Avenue of Animals, the Ming Tombs, Tian'anmen Square and the Great Hall of People.

Shaanxi is located in north central China. Its capital is Xi'an. Tourists visit the tomb figures of Emperor Shi Huang, China's "First Emperor". The archeological finds in Shaanxi help tell the story of China's long history. In fact, China is the longest continuous civilization in the world. Four inventions from China are the compass, gunpowder, papermaking and printing.

Xinjiang lies in the northwest corner of China. Its border with the Soviet Union makes its location an important defense position. Its capital is Urumqi. Twelve of China's 55 national minorities live in Xinjiang. About half of the national minority population is Uygurs.

Tibet is located in the southwest corner of China. Its capital is Lhasa. Tibet is the home of the Tibetans, a national minority. Tibetan customs are strongly influenced by a religion called Lamaism. The spiritual leader is the Dalai Lama.

3
人口及土地利用
Population and Land Use

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Vocabulary and Definitions

1. *agrarian (ə grer'ē ən)* . . . . . *Relating to farming.* *p. 64.*

2. *animal husbandry (an'ə məl huz'bən drē)* . . . . . *The taking care of animals.* *p. 61.*

3. *census (sen'səs)* . . . . . *An official count of the number of people in a country.* *p. 57.*

4. *fodder (fod'ər)* . . . . . *Coarse food, such as cornstalk, feed to livestock.* *p. 67.*

5. *industry (in'də strē)* . . . . . *The business of producing a particular kind of good or providing a service; examples of goods are bicycles and clothes; examples of services are telephone repair and banking.* *p. 62.*

6. *labor intensive (lā'bər in ten'siv)* . . *Relating to or involving a great deal of human labor.* *p. 66.*

7. *manual (man'yü əl)* . . . . . *Relating to work done by hand.* *p. 66.*

8. *metropolitan area (met'rə pol'ə tən er'ē ə)* . . . . . *A major city and the densely populated surrounding areas.* *p. 72.*

9. *population density (pop'yə lā'shən den'sə tē)* . . . . . *The number of people in a given area, such as a square mile or square kilometer. An example would be part of a city.* *p. 57.*

10. *population distribution (pop'yə lā'shən dis'trə byü'shən)* . . *The pattern of population densities over a large area, such as a country.* *p. 57.*

3.1 Introduction

As a geographer, you are now ready to work with another important geographic idea. This is the distribution of people, land, and products. Think of the land in your neighborhood. Is it covered with trees? Some places may have trees. Others may not. Most things are unevenly distributed over the surface of the earth.

In this chapter, you are going to find out how many people live in China and how the land use influences where they live. Some of the land is rural and used for farms. Others land is urban and used for cities and industries. China's population and land use are discussed by Geographic Regions and Focus Units.

You will begin to see connections between population and land use. For example, large numbers of people usually live where there is good quality crop land. You will be able to explain why so few people live on pasture land. **Land use influences where the Chinese people live and how many live there.**

The United States and China have similarities and differences in their population and land use. Can you compare the total population of China and the United States? Can you compare the amount of crop land of each country?

The questions of the beginning of each topic are your guideposts. Answer these questions by locating the main information in bold type throughout the chapter. Once you know the answers, you have mastered the basic facts about China's population and land use.

3.2 China's Population

- How does China's population rank in the world and to the United States?
- What are the five categories of population density?
- In China, where do most of the Chinese people live?
- What is the population density of China's special cities?
- What are the comparisons between the very densely populated areas of China and the United States?

China has the largest population of any country in the world. There are over one billion people in China. **The 1982 *census* gave the official count as 1,008,175,288.** Compared to the 1985 world population of 4.845 billion, **China has over one-fifth (21%) of the world's population.**

China's population has increased to be more than four times the population of the United States (Figure 3-1). The United States is fourth in world ranking. India is second and the Soviet Union is third.

In any country, where people live and how many live there is called *"population distribution"*. In general, **more people live where land is fertile or is used for industries. Fewer people live where land is infertile or not used for industries.**

A country's population is unevenly distributed over its territory. Certain terms describe how people are spread out in a given space. If there are many people living in a small space, such as one square mile, that is called "dense" population. If there are only a few people in the same amount of space, that is called "sparse" population. **In this book, five categories of *population density* are used. They are "very dense", "dense", "sparse", "very sparse", and "uninhabited".** Each category represents a certain number of people per square mile over an area.

Rank	Country	Population
1	China	1,042,000,000
2	India	762,200,000
3	Soviet Union	278,000,000
4	United States	238,900,000

Reference: 1985 WORLD POPULATION DATA SHEET, Population Reference Bureau, Inc. 1985

Figure 3-1: The four most populous countires in the world

In China, where do most of the Chinese people live? This question can be answered in two ways. First, what governing units are the most populated. Second, what area of China are the most populated? The most populous governing units include Guangdong, Hebei, Henan, Hunan, Jiangsu, Shandong, and Sichuan (Figure 3-2). Most of these provinces are located in the eastern part of the country (Figure 2-1, Page 18). Their combined land area is 17 per cent (17%) of China's territory. However, 47 per cent (47%) of the Chinese people live there. **This means that almost half of the Chinese people live on less than about one sixth of the land.**

census (sen'səs) . . . . . *An official count of the number of people in a country.*

population density (pop'yə lā'shən den'sə tē) . . . . . *The number of people in a given area, such as a square mile or square kilometer. An example would be part of a city.*

population distribution (pop'yə lā'shən dis'trə byü'shən) . . *The pattern of population densities over a large area, such as a country.*

A. Provinces	Population[1]
Anhui	46,660,000
Gansu	19,570,000
Guizhou	28,550,000
Heilongjiang	32,670,000
Hubei	47,800,000
Jiangsu	60,560,000
Jilin	22,560,000
Qinghai	3,900,000
Shandong	74,420,000
Sichuan	99,710,000
Yunnan	32,550,000

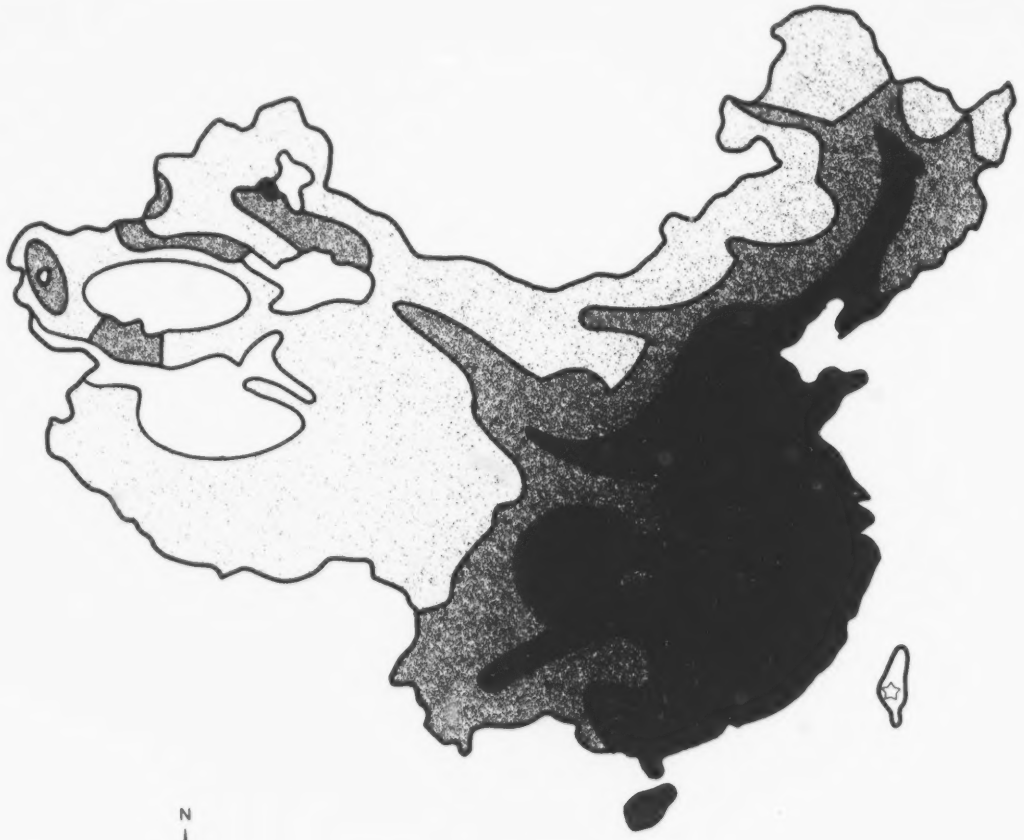
B. Special cities	Population
Beijing	9,230,000
Tianjin	7,760,000

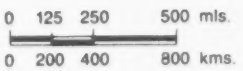
C. Autonomous Regions	Population
Guangxi	36,420,000
Ningxia	3,900,000
Xinjiang	13,080,000

Reference: see Figure 2-2

Figure 3-2: The population of China's governing units

The five least populous governing units are mostly autonomous regions. They are Inner Mongolia, Ningxia, Qinghai, Tibet, and Xinjiang. They are located in the western and northwestern part of the country. **Their area is about 50 per cent (50%) of China's territory, but supports only four per cent (4%) of the Chinese people.**





KEY

		Persons: Square miles	Persons: Square kilometers
VERY DENSE	■	over 500	over 200
DENSE	■	250-500	100-200
SPARSE	▒	25-249	10-99
VERY SPARSE	▒	1-24	1-9
UNINHABITED	□	0	0
Information Not Available	☆		

Reference: THE TIMES ATLAS OF CHINA, 1974

Figure 3-3: China's population distribution

The most densely populated area is along the eastern seaboard (Figure 3-3). It stretches from Beijing to Canton. In America, there are also densely populated areas on the east coast from Boston to Washington, D.C.

In China, very densely populated areas spread inland from the coast to such cities as Xi'an and Chengdu. In the United States, the very dense population does not extend inland as much. Instead, the very dense populations center around major cities scattered throughout the country.

In general, cities are more densely populated than rural areas. This is true in China and America. Compare the populations of the three most populous cities of both countries (Figure 3-4).

China			United States		
Rank	City	Population	Rank	City	Population
1	Shanghai	11,860,000	1	New York Metro. Area	9,120,000
2	Beijing	9,230,000	2	Los Angeles Metro. Area	7,478,000
3	Tianjin	7,760,000	3	Chicago	7,104,000

Metro: Metro. is an abbreviation for metropolitan

Reference: China: POPULATION BULLETIN, CHINA DEMOGRAPHIC BILLIONAIRE, Population Reference Bureau, Inc., 1983.
United States: THE WORLD ALMANAC AND BOOK OF FACTS, 1985.

Figure 3-4: Population of the three most densely populated cities in China and the United States

3.3 Land Use

China's land use, like most countries, varies over its territory. Farm land is the most important land use, since most of the Chinese people are farmers. The crops grown on this farm land make up the greatest portion of the Chinese diet. Another use of the land is for trade and industrial centers.

A. Background

- What are the four classifications of China's land?
- What is the most important land use to the Chinese.
- Where are the cropland, pasture land, and forest land located in China?
- What are the uses of the cropland, pasture land, and forest land in China?

In this book, China's land use fits into the following classifications: cropland, pasture land, forest land and other (Figure 3-5). The United States has the same land uses, although the percentages are different.

Farm land is the most important land use for the Chinese people. The farm land consists of cropland and pasture land. Most of the cropland is located in eastern China (Figure 3-6). **The major food crops are rice and wheat. Most of the pasture land is located in northeast and west China. This land is used mostly for *animal husbandry*.**

animal husbandry (an'ə məl huz'bən drē) . . . . . The taking care of animals.

The most productive forest land is located in the northern mountains of China. Trees are cut to provide goods such as building materials, fuel and paper products. Much of the forest in eastern China was cut down hundreds of years ago. Since 1949, the Chinese people have replanted much of the sloping land not useful for crops.

	China	United States
Cropland area	11%	18%
Pasture land area	24%	29%
Forest land area	13%	29%
Other land area*	52%	24%
Total area	100%	100%

* includes brushwood land area, barren hills and stony soil area, sand dunes and deserts area, glaciers and permanent snow, coastal mudland, grassland that is not usable for pasture, and land in cities, towns, and mines.

Figure 3-5: Comparison of land uses of China and the United States

In this book, the other land areas described are used for cities and *industries* (Figures 3-5). They are major urban areas. These areas are also the most populated parts of China.

industry (in'də strē) . . . . . *The business of producing a particular kind of good or providing a service; examples of goods are bicycles and clothes; examples of services are telephone repair and banking.* p. 62.

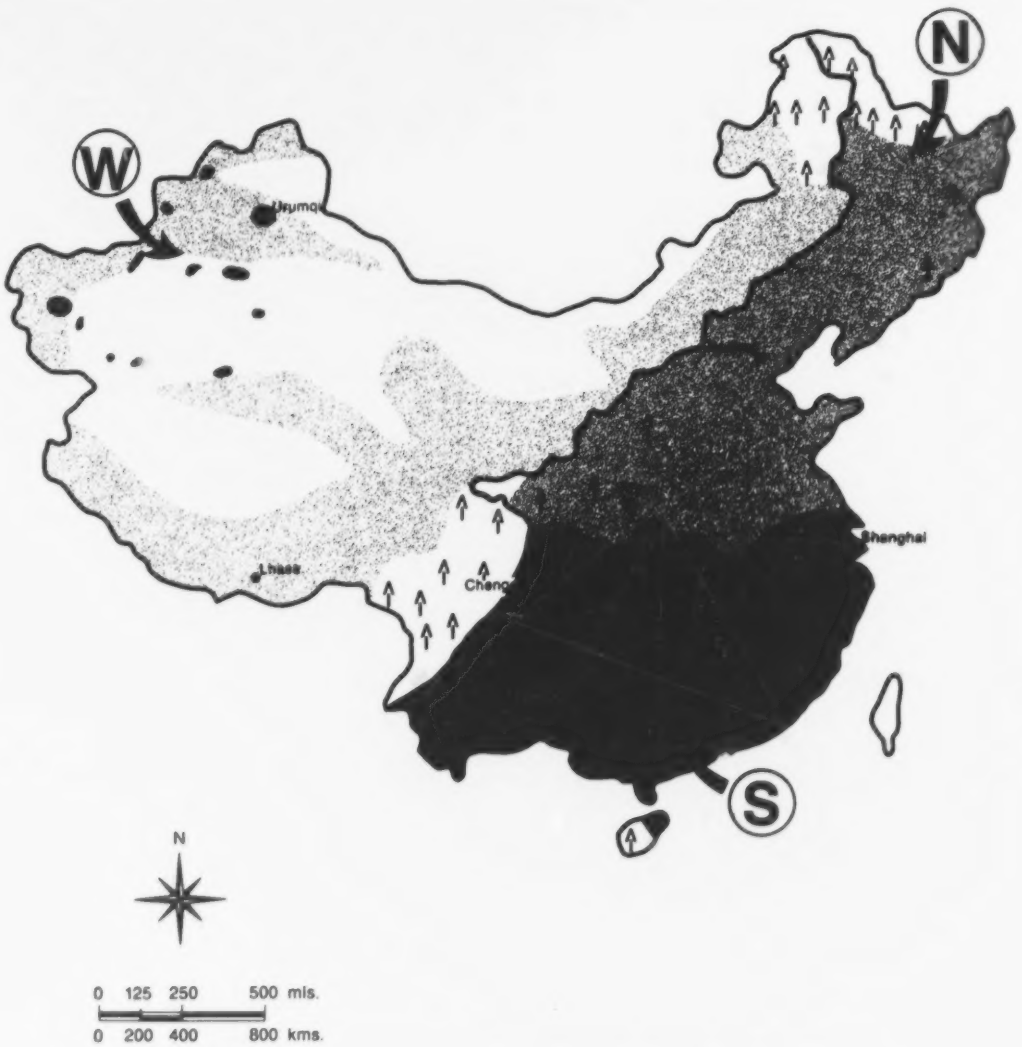


Figure 3-6: China's land use

B. China — A Land of Farmers

1. Background

- Why is China a land of farmers?
- Why is it difficult to grow enough food in China?
- What is the comparison between the amount of food produced in China and the United States?

China is a land of farmers. They are also called peasants. **At least 80 percent (80%) of the Chinese people live in the countryside.** Like people of other *agrarian* countries, most of the Chinese people make their living by farming. Their survival depends to a great degree on what they raise. **In general, land use strongly influences where people live and how many live there.**

It is difficult to grow enough food for the large Chinese population because the country has very little cropland. Only 11 per cent (11%) of China's land is cropland. With as little cropland, the Chinese have become experts at farming every square inch of fertile soil. Even farm by-products, such as the stalks of wheat plants, are used as fuel. In parts of China, the people maximize the farm land by growing two, and occasionally three, crops on the same land each year. Many countries, including the United States, also practice "double" or "triple cropping".

Most of the food grown in China is used for feeding over one billion Chinese people. In the United States, farmers grow much more than is needed to feed the 250 million Americans. Large amounts of surplus crops are exported. Unlike China, some American fields can lie fallow for long periods.

agrarian (e grer'ē ən) . . . . . Relating to farming.

2. Rice

- Why is rice the most important crop in China?
- Where is rice grown?
- What conditions are needed to grow rice?
- What are the steps involved in the rice growing process?

Figure 3-7: Planting rice in Sichuan, China

Rice is the most important crop in China. Its high yield feeds millions of Chinese. More land is used to grow rice than any other crop. In the world market, China is the largest producer of rice, tea and peanuts. Rice is grown mostly in the south. This region provides especially good conditions to grown rice. They are sunlight, warm temperatures, a plentiful supply of water, and fertile soil. Here, many of the farmers plant two crops a year. A third crop can be grown in the extreme southeast.

Growing rice is a *labor intensive* process. There are many steps involved in growing rice. Much of the work is done by hand (Figure 3-7).

It takes about four months for rice to grow. First, the seeds are planted in seedbeds. After one month, when the seedlings are a few inches high, they are transplanted into paddyfields.

During the three months growing period, other work must be done to care for the rice plant. Field must be covered at all times with about five inches of water. They must be weeded by hand two or three times. A common sight in China is to see farmers weeding the fields.

When the rice is fully grown, harvesting is done *manually*. After the farmers cut the stalks, threshing is done by hand or by machine to separate the grain from the stalks. The grain is air dried in large heaps, then stored.

labor intensive (lā'bər in ten'siv) . . Relating to or involving a great deal of human labor.

manual (man'yü əl) . . . . . Relating to work done by hand.

Even the stalks are put to use. After drying, the straw is bundled, then used for fuel, or animal bedding and *fodder.*

Figure 3-8: Harvesting wheat by machine on North China Plain, near Beijing, China

3. Wheat

- Where is wheat grown?
- Why is wheat hardier than rice?
- What are the steps involved in the wheat growing process?

fodder (fod'ər) . . . . . *Coarse food, such as cornstalk, feed to livestock.*

Wheat is the second most important crop in China. China, the United States and the Soviet Union all grow about the same amount of wheat.

Wheat is grown mostly in the north. There are scattered areas in west China where wheat can grow. Wheat is hardier than rice because it can endure cooler and dryer growing conditions. Much less water is needed to grow wheat than rice.

It takes several months to grow wheat. **Growing wheat requires less care and manual labor than growing rice.** Machines play a major role in wheat farming (Figure 3-8). Once the seeds are planted in rows, they are left to grow to several feet in height. Machines are used to harvest the stalks and thresh the grain. The grain is used for food. The stalks are used for fodder, animal bedding and fuel.

Figure 3-9: Herding sheep in Inner Mongolia, China

4. Animal Husbandry

- Where does animal husbandry take place in China?
- What do these animals provide?

Farm land in the west and parts of the northeast is mostly pasture land. It is devoted to animal husbandry. Eighty percent (80%) of grazing animals are sheep (Figure 3-9). The rest are horses, yaks, and camels. **These animals provide meat, transportation, fiber for cloth and skins for leather.**

C. The Chinese Diet

- What food groups are the basis of the Chinese and American diets?
- What are some of the customs relating to the Chinese and American diets?

The Chinese diet consists mostly of food that is grown or available locally. People in most agrarian countries depend on foods produced in their own locations. **The Chinese diet is based heavily on grains and potatoes** (Figure 3-10). **The grains are rice and wheat.** To this the Chinese add fish, meat and vegetables. The major source of meat in the north and south comes from hogs (pigs). In the west it comes from sheep. Additional meat comes from chickens and ducks. Soybeans and peanuts also provide protein. Bean curd, from soybeans, is popular in China and in many Chinese restaurants throughout the world. In America, it is called "tofu". Milk and diary products do not play as great a part in the Chinese diet as they do in America.

In America, the diet is based heavily on poultry, meat and diary products. Grains and potatoes make up one-fourth of the American foods. Unlike China, more food in America is processed, canned, or frozen, and can be delivered throughout the country.

Chinese people devote more time to buying foods than do American people. Most Chinese shop daily, since few have refrigerators. A common sight early in the morning is to see them buying their foods in the open street markets. Most of the food is sold fresh since it comes directly from the farms. For example, chickens are bought live and killed at home before cooking.

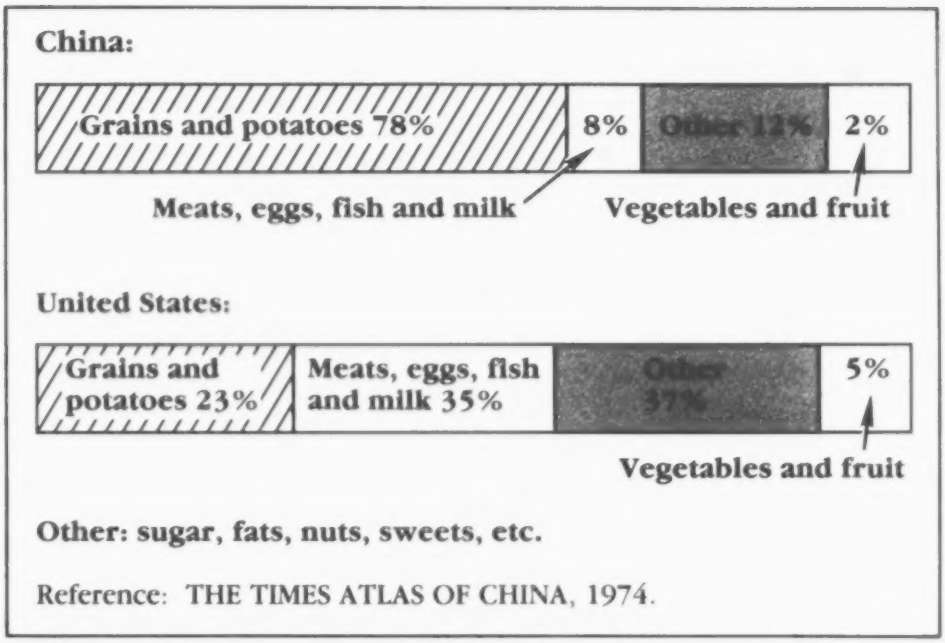


Figure 3-10: Comparison of the average daily diet in China and the United States

Think back to all the regional cuisines described in Chapter 2. In the south, the Cantonese, Shanghai, and Sichuan cuisines have rice as their staple grain. The rice grains are cooked in boiling water and served in individual rice bowls. In the north, such as Beijing, the basic staple grain is wheat. The wheat flour is used to make noodles, breads, cakes, or biscuits. In the north and west, a popular mutton dish is the Mongolian Hot Pot. The pot, an iron dish, is placed in the center of the dining table. Thin strips of mutton, vegetables and other foods are dunked into a boiling broth in the pot. The strips are dipped into a hot and spicy sauce, before being eaten.

There are also regional and ethnic cuisines throughout the United States. Popular ones include Mexican cuisine and Italian cuisine. One difference between the eating habits of the Chinese and Americans is the use of utensils. In China, the people use chopsticks. In the United States, the people use knives, forks and spoons.

D. China's Urban Land

- What is the use of China's urban land?
- What is the comparison between the amount of urban land and farm land?

The land on which cities are located has a different use than farm land and forest land. **Many of China's cities are trade and industrial centers.** This urban land is crowded with buildings for houses, businesses, services and industries. People who live and work in cities produce goods and provide services.

The amount of urban land in a country is usually small compared to the farm land. But many people live in cities. **In fact, *metropolitan areas* are the most densely populated areas in a country.** Look back to Figure 3-4 on page 60 to see how many people live in the special cities of China.

In this book there are four major types of manufacturing or industries in China: light industry, heavy industry, metals industry and oil industry (Figure 3-11). Up until 1949, China's manufacturing output was very small and confined to east coast areas. It consisted mostly of the light industries of textiles and food processing. Since 1949, the central government has made impressive strides in broadening its industrial base. China's special cities are among its major industrial centers. Compare the industries of the Focus Unit special cities or captials. **Although the industrial concentration is still in the east, new major manufacturing centers are being located in the west.**

metropolitan area
(met'rə pol'ə tən er'ē ə) . . A major city and the densely populated surrounding areas.

	SOUTH CHINA			NORTH CHINA		WEST CHINA	
	Canton	Shanghai	Chengdu	Beijing	Xi'an	Lhasa	Urumqi
Light Industry — cement	•						
— textiles	•	•		•	•		
Heavy Industry — agricultural machinery				•			
— engineering tools		•	•	•			
Oil Industry — oilfields			•				•
Metal Industry — iron & steel		•					

Reference: Goldstein, Sears, Bush, THE PEOPLE'S REPUBLIC OF CHINA: A BASIC HANDBOOK , 1984.

Figure 3-11: China's four major industries

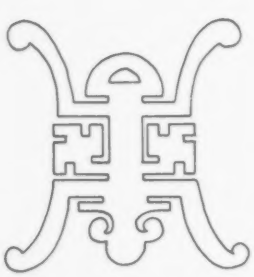
3.4 Geographic Regions and Focus Units

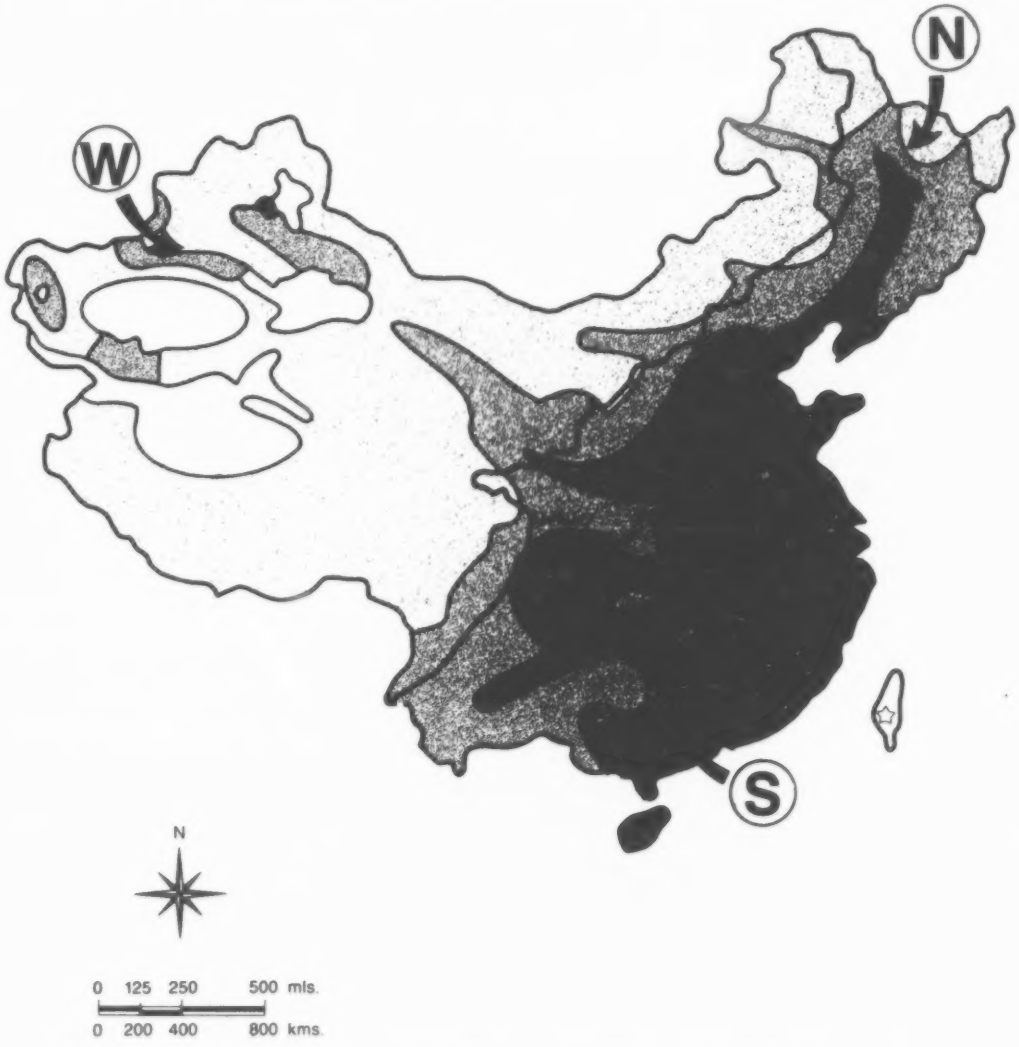
- What are the population density and land use of each major Geographic Region?
- Which Focus Unit special cities or capitals are industrial centers?

(S) **Most of South China is densely or very densely populated** (Figure 3-12). **This region supports many people because of its fertile cropland.** The cropland has a high rice yield. **The industrial centers include Canton, Chengdu, and Shanghai.**

(N) **Most of North China has a population density similar to South China. Like the South, this region has productive cropland.** It produces a high wheat yield. The North has more manufacturing industry than the South. **The industrial centers include Beijing and Xi'an.**

(W) **West China is almost the opposite of South China and North China in terms of population density and land use. Overall, it is very sparsely populated.** A great degree of land is used for animal husbandry, as in Xinjiang and Tibet. **Manufacturing industries are being developed in a number of cities, like Urumqi and Lhasa.**





KEY		Persons	
		Square miles	Square kilometers
VERY DENSE		over 500	over 200
DENSE		250-500	100-200
SPARSE		25-249	10-99
VERY SPARSE		1-24	1-9
UNINHABITED		0	0
Information Not Available	☆		

Reference: THE TIMES ATLAS OF CHINA, 1974.

Figure 3-12: China's population distribution by Geographic Regions

3.5 Summary

As a geographer, you can now explain the distribution of China's people, land products. What you have found out is that land use strongly influences where the Chinese live and how many live there. There are comparisons between how the Chinese and American people are distributed over their territory and how they use their land and how many live there.

More people live where land is fertile or is used for industries. Fewer people live where land is infertile or not used for industries. A country's population is unevenly distributed over its territory. This can be stated in terms of population distribution and population density. In this book, five categories of population density are used — very dense, dense, sparse, very sparse and uninhabited.

China has the largest population of any country in the world — as of 1982 it was 1,008,175,288. That is over one-fifth of the world's population. It is also four times the population of the United States.

In China, almost half of the people (47%) live on less than one-sixth of the land. This territory covers most of the eastern part of the country — yet four per cent (4%) of the people live on about 50 per cent (50%) of the land in the western and northwestern parts of the country.

The most densely populated area in China stretches along the eastern seaboard from Beijing to Canton. In China, there are very densely populated areas that also spread inland from the east to such cities as Xi'an and Chengdu. China's and America's cities are more densely populated than their rural areas.

China's land use varies over its territory. The land use has four major classifications — cropland, pasture land, forest land and other land use including cities and industry.

Farm land, made up of cropland and pasture land, is the most important land use for the Chinese people. Most of the crop land is located in eastern China. The major food crops are rice and wheat. Most of the pasture land is located in northeast and west China. This land is used for animal husbandry. The most productive forest land is located in the northern mountains of China. Trees are cut to provide goods such as building materials, fuel and paper products.

China is a land of farmers. At least 80 per cent (80%) of the Chinese people live in the countryside. In general, land use strongly influences where people live and how many live there. It is difficult to grow enough food for the large Chinese population because the country has very little cropland. Most of the food grown in China is used to feed the Chinese people.

Rice is the most important crop in China. Its high yield feeds millions of Chinese people. More land is used to grow rice than any other crop in China. In the world market, China is the largest producer of rice. Rice is grown mostly in the south. Wheat is the second most important crop in China. Wheat is grow mostly in the north. Growing wheat requires less care and manual labor than growing rice. Farm land in the west is mostly pasture land used for animal husbandry The animals provide meat, transportation, fiber for cloth and skins for leather.

The Chinese diet consists mostly of food that is grown or available locally. The Chinese diet is based heavily on grains and potatoes. The grains are rice and wheat. Chinese people devote more time to buying foods than do American people.

Many of China's cities are trade and industrial centers. The amount of urban land in a country is usually small compared to the farm land. Cities are the most densely populated areas in a country. The four major types of manufacturing or industries in China are light industry, heavy industry, metals industry and oil industry. Although the industrial concentration is still in the east, new major manufacturing centers are being located in the west.

Most of South China is densely or very densely populated. This region supports many people because of its fertile cropland. The cropland has a high rice yield. The industrial centers include Canton, Chengdu and Shanghai.

Most of North China has a population density similar to South China. Like the South, this region has productive cropland. It produces a high wheat yield. The North has more manufacturing industry than the South. The industrial centers include Beijing and Xi'an.

West China is the opposite of South China and North China in terms of population density and land use. Overall, it is very sparsely populated. A great deal of land is used for animal husbandry, as in Xinjiang and Tibet. Manufacturing industry is being developed in a number of cities, like Urumqi and Lhasa.

4
地勢
Landforms

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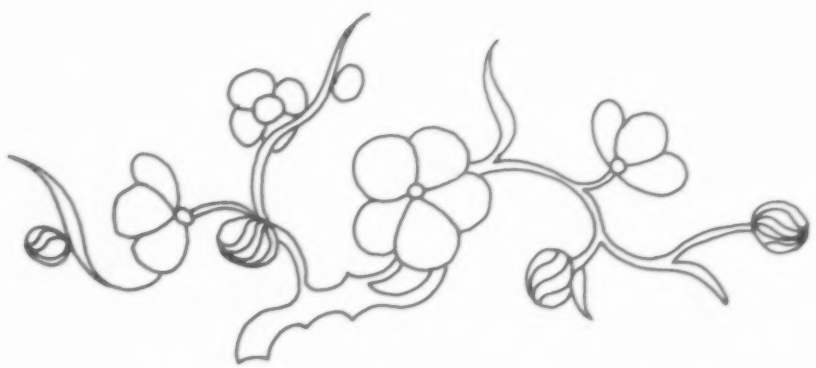
Vocabulary and Definitions

1. *erosion (i rō'zhən)* . . . . . *The process of eating or wearing away of soil. p. 106.*
2. *irrigate (ir'ə gāt)* . . . . . *To supply land with water by artifical means. p. 91.*
3. *karst (kärst)* . . . . . *In China, limestone hills that are narrow and tall. They are common in the Guilin area of Guangxi province. p. 100.*
4. *loess (lō'is)* . . . . . *A wind-carried deposit of fine soil. In China, the soil is yellow and grainy. p. 105.*
5. *pinnacle (pin'ə kəl)* . . . . . *A pointed, towering formation often of rock. p. 100.*
6. *reforestation (rē'fôr ə stā'shən)* . . . *A replanting of trees. p. 96.*
7. *terraced slope (ter'ist slōp)* . . . . . *A slope that has been carved into a series of flat platforms or terraces. p. 94.*
8. *topography (tə pog'rə fe)* . . . . . *The study of the physical features of a given place such as a country or region. One aspect is landforms. p. 82.*



4.1 Introduction

As a geographer, you need to understand the relationship between landform features and population. **China's landform features influence where the Chinese people live and how many live there.**

Perhaps you've never thought about it, but landform features affect where you live. Think about the landform where you live. Are there mountains, hills, plains? Do you live on a plateau or in a basin? Next, think about why you live on that landform. Can you live on a high barren mountain peak as easily as on a low fertile plain?

In this chapter, you will first find out about China's Lowland, Midland and Highland. Next, you will read about China's mountains, plateaus, basins, hills and plains. Third, 10 landform regions are described in detail. Next, you will analyze how China's landform features include population distribution. Lastly, you will look at China's landforms based on the Geographic Regions and Focus Units.

Throughout this chapter are comparisons between the landforms of China and the United States. Do you know about the Great Basin in the United States? Which country has more mountains devoted to forestry?

The questions at the beginning of each topic are your guideposts. Answer these questions by locating the main information in bold type throughout the chapter. Once you know the answers you have mastered the basic facts about China's landforms.

4.2 China's Topographic Staircase

- What are the three steps of China's topographic staircase?
- Where are the three steps of China's topographic staircase located?

Think of China's *topography* as a giant three step east-west staircase (Figure 4.1). **The bottom step, called Lowland, is in the eastern part of China.** (Figure 4.2). It is mostly under 3,000 feet (900 m.) in elevation above sea level. It lies on the east coast near the Pacific Ocean. **The middle step, called Midland, extends through central and northwest China.** It is between 3,000-9,000 feet (900-2,750 m.) in elevation. **The top step, called Highland, rises in the southwestern part of the country.** It is over 9,000 feet (2,750 m.) in elevation. In other words, **China's topography steps up from the eastern coastline to the western mountains.**

topography (tə pog'rə fe) . . . . . *The study of the physical features of a given place such as a country or region. One aspect is landforms.*

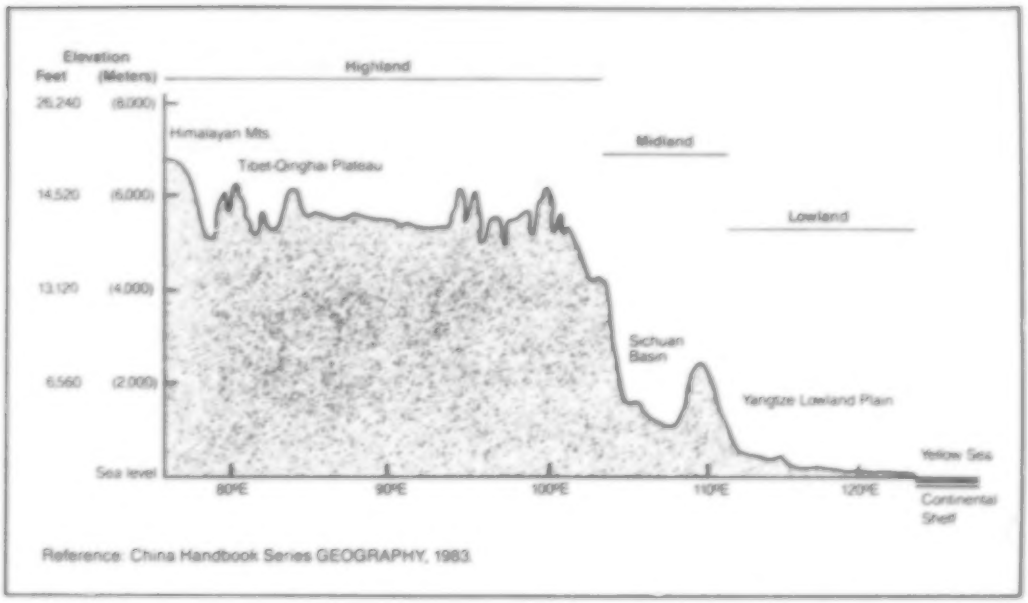
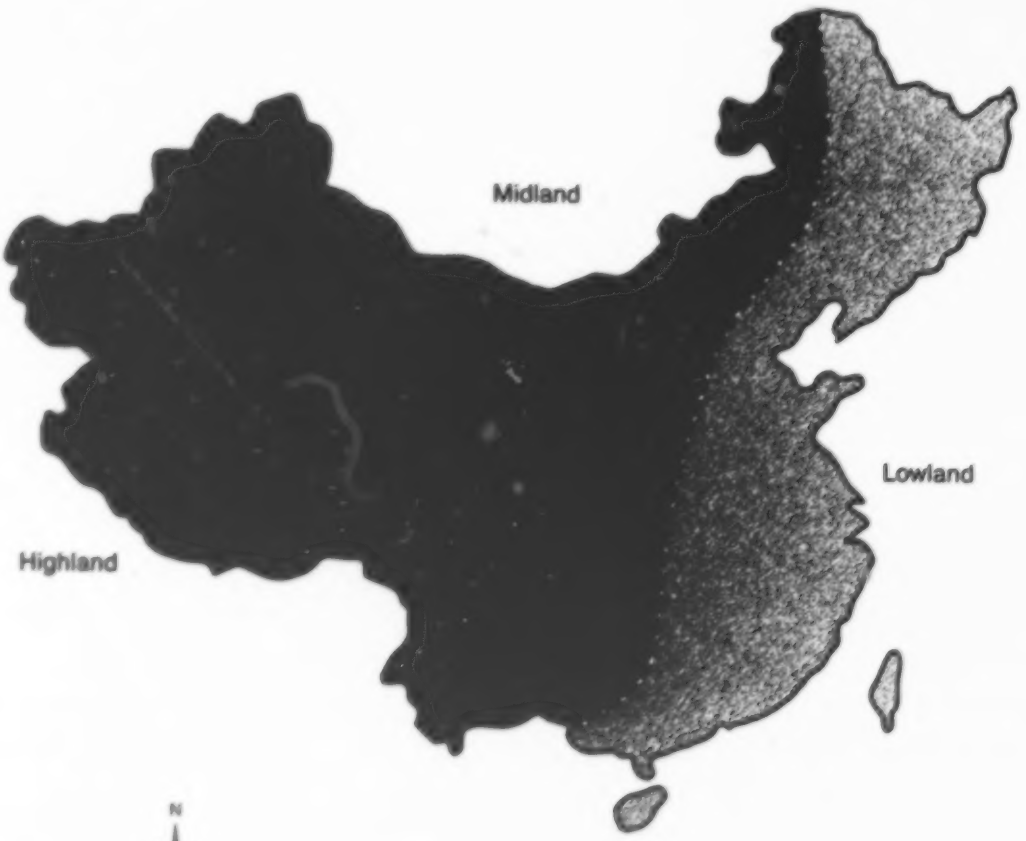


Figure 4-1: Cross-section of China's topographic staircase at 34°N latitude



KEY

	Step		Elevation: Feet	Elevation: Meters
HIGHLAND	TOP		Over 10,000	Over 3,000
MIDLAND	MIDDLE		3,300-10,000	1,000-3,000
LOWLAND	BOTTOM		Under 3,300	Under 1,000

Reference: China Handbook Series GEOGRAPHY, 1983.

Figure 4-2: China's topographic staircase

4.3 China's Major Landforms

A. Background

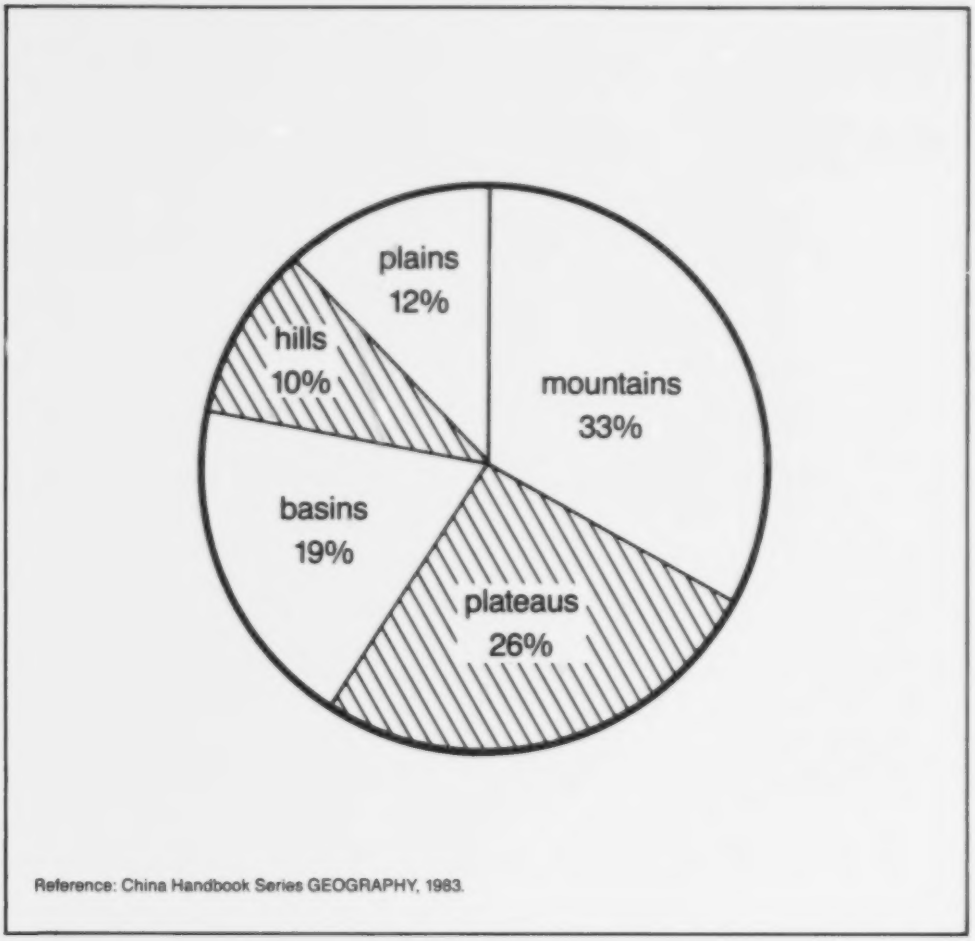
- What are the five major types of landforms in China?
- Where are the rough and high surfaces of China located?

China's landform features, like those of many countries, are varied over its territory. China has five major types of landforms: mountains, plateaus, basins, hills and plains. Most of China's land surface in the western and central parts is rough and high in elevation. Over two-thirds (69%) of China's territory is covered with mountains, plateaus and hills (Figure 4-3).

B. China's Mountains

- Where are China's mountains located?
- What are the names of China's major mountain ranges?
- What is the direction of China's mountain ranges?
- What is the land use of China's mountains?

China has many mountain ranges. In this book, high mountains are those with an elevation over 3,000 feet (900 m.). **The high mountains are in the Midland and Highland** (Figure 4-4). **Those described in this book are the Greater Hinggan, Himalayan, Kunlun, Qinling and Tianshan Mountains.** One of the highest mountain ranges in China is the Tianshan Mountains in Xinjiang (Figure 4-5).



Reference: China Handbook Series GEOGRAPHY, 1983.

Figure 4-3: China's major landforms

Figure 4-4: China's major mountains

Figure 4-5: Herding sheep near Tianshan Mountain, Xinjiang, China

The low mountains are in the Lowland. Their elevations are under 3,000 (900 m.). **The two described in this book are the Lesser Hinggan and the Nanling Mountains.**

China's mountain ranges tend to run east-west. The exception is the Greater Hinggan range. It runs north-south.

China's mountains are used for cropland, pasture land, and forest land. There can be different land uses on the same mountain. **In general, the higher the elevation and the rougher the surface of a landform the more difficult the farming.** One section of the Himalayan Mountain range demonstrates different land use. In the lower part are broadleaf forests and scattered areas of cropland. Going up the mountain, there are needleleaf forests. Next, comes an area of brush. Above the brush area are meadows that may support some livestock farming. The top of the Himalayas is covered with snow year round.

C. China's Plateaus

- Where are China's plateaus located?
- What are the names of China's major plateaus?
- What is the land use of China's plateaus?

China's major plateaus are located in the Midland and Highland (Figure 4-6). **The four major plateaus are the Inner Mongolian, the Loess, the Tibet-Qinghai and the Yunnan-Guizhou Plateaus.** Each plateau has its own characteristics. For example, the Tibet-Qinghai Plateau is covered with many mountain peaks that are snow-capped year round. In contrast, the Yunnan-Guizhou Plateau is much warmer and more humid year round.

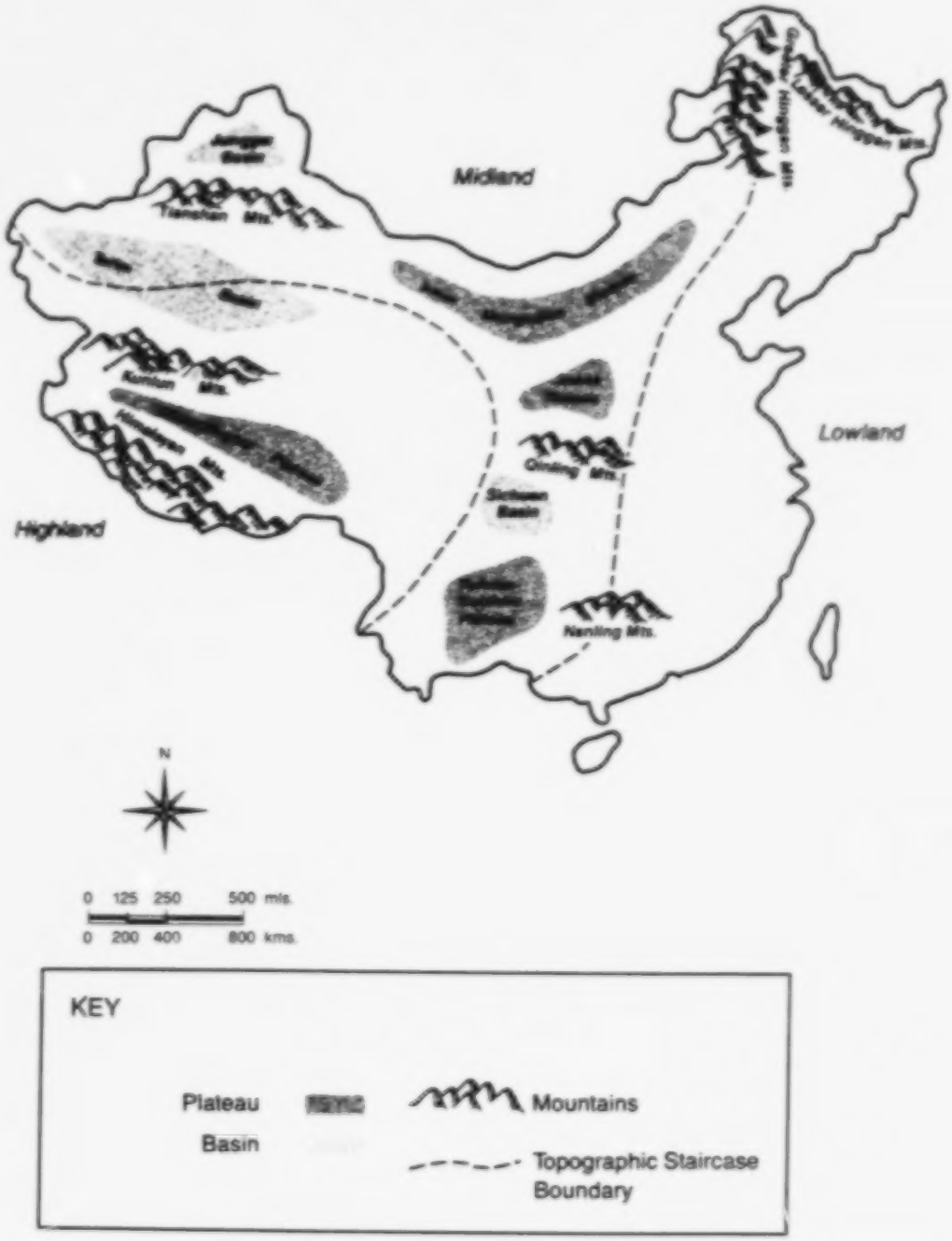


Figure 4-6: China's major mountains, plateaus and basins

China's plateaus support two major types of land use, cropland and pasture land. Cropland produces high yields, while there is fertile soil, ample water and warm temperatures. Most of the water comes from rain; but in places, springs, wells and rivers provide water for *irrigation*. Pasture land supports animal husbandry. **In fact, China's plateaus are the leading stock raising areas of the country.** (Figure 3-9 on page 69.)

irrigate (ir'ə gāt) . . . . . To supply land with water by artifical means.

D. China's Basins

- Where are China's basins located?
- What are the names of China's major basins?
- What is the land use of China's basins?

China's three major basins are in the Midland (Figure 4-6). **They are the Sichuan, the Junggar and the Tarim Basins.** They have different characteristics. For example, the Sichuan Basin is green year round, whereas the other two basins are mostly desert.

Parts of the basins are used for cropland and pasture land. The Sichuan Basin is a major farming area. The Junggar Basin includes pasture land. The Tarim Basin has cropland in the oasis.

E. China's Hills

- Where are China's hills located?
- What are the hills described in this book called?
- What is the land use of China's hills?

Hills are found in most parts of China. They are on all three steps of the topographic staircase. Many hills are located in east China. **The hills described in this book are called the southeast hills** (Figure 4-7). They are near the Nanling Mountains.

Figure 4-7: China's major landforms

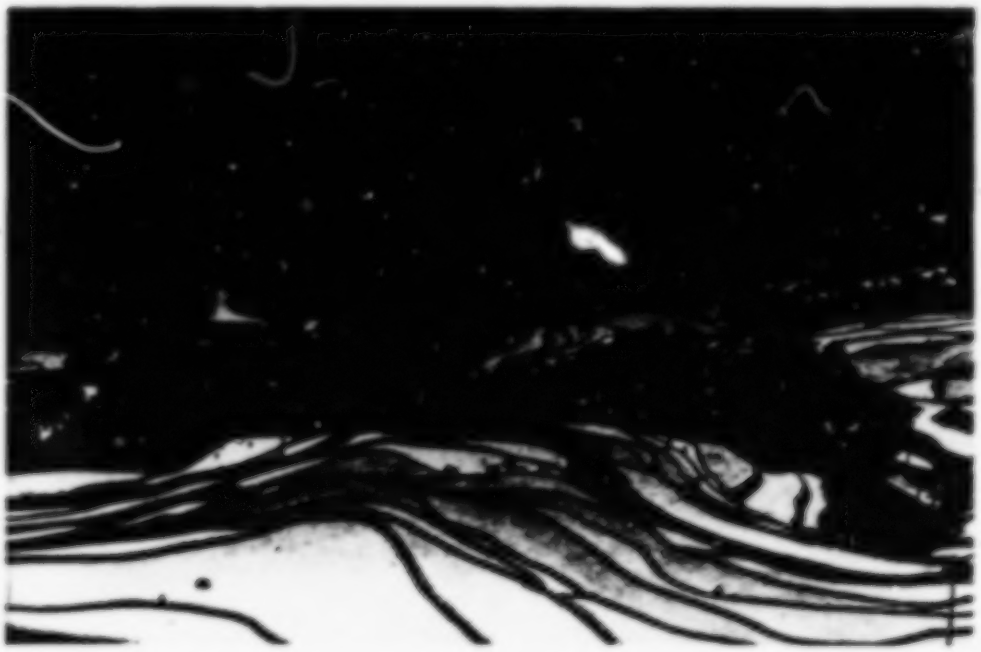


Figure 4-8: Flooded rice fields on terraced hillsides, Yunnan, China

China's southeast hills are heavily farmed in their valleys and on some of their slopes. Their areas have warm temperatures and ample water from rainfall, rivers and wells. The Chinese carve terraces into the hills (Figure 4-8). This increases the amount of cropland. These *terraced slopes* produce rice and other crops such as tea, peanuts and tangerines.

F. China's Plains

- Where are China's plains located?
- What are the names of China's plains?
- What is the land use of China's plains?

terraced slope (ter'ist slōp) . . . . . A slope that has been carved into a series of flat platforms or terraces.

Most of China's plains lie in the Lowland (Figure 4-7). **The three major plains are the Northeast, the North China and the Yangtze Lowland Plains.** These three plains all have river valleys. A smaller plains area is along the Pearl River in the south.

China's plains, like plains in many countries, produce more crops than other types of landforms. The gentle terrain is combined with fertile soil, ample water and warm temperatures for much of the year. In China, these natural factors are combined with the human factors of intensive manual labor, irrigation and fertilization. The fertilizers come mostly from river sediment and animal and human wastes. Chemical fertilizers are being used more and more.

G. Land Use Comparison between China and the United States

There are similarities between the land uses of China's and the United States' landforms. In both countries, the most productive landform is the plain. With the good conditions mentioned above, the plains of the United States have become world producers of wheat and corn. Especially important are the Midwest Central Plains. In fact, so much is produced that the United States is the leader in grain exports worldwide, and has, at time, cut back on the amount of land that is farmed.

There are two major differences between the landform uses of China and the United States. First is the number of basins. The major American basin is the Great Basin. The Great Basin covers part of Nevada and Utah. **Second**, is the amount of forestry on the landforms. The United States has more forest land. The American northwest is the most important forest region. Unlike the United States, China has less forest land. Since 1949, the central government has instituted a program of *reforestation*. The Chinese people have been planting trees by the million in many areas. Now, once bare hills and mountains are covered with young trees.

reforestation (rē'fôr ə stā'shən) . . . A replanting of trees.

4.4 China's Landform Regions

To make it easier to remember information about China's landforms, this book divides China into 10 landform regions (Figure 4-9). **Each landform region has its own features.** They are arranged by Geographic Regions.

A. South China

- What are the names of the landform regions in South China?
- What is the major crop grown in South China?
- What is the main landform feature of each region?
- What major industrial cities are in each region?

South China has four landform regions (Figure 4-10). **They are the Southeast Lowland, Yangtze Lowland, Sichuan Basin, and Yunnan-Guizhou Plateau Regions. Rice is the main crop grown in South China.**

1. Southeast Lowland Region

The Southeast Lowland Region consists of fertile valleys separated by hills and low mountains. It is noted for its hilliness. They are called the southeast hills. A general name for several parallel mountain ranges running east-west in this region is the Nanling Mountains. They are low mountains and form a natural barrier between the governing units of Guangxi-Guangdong and Hunan-Jiangxi.

KEY

Major Landforms

1. Junggar Basin
2. Tianshan Mts.
3. Tarim Basin
4. Kunlun Mts.
5. Tibetan-Qinghai Plateau
6. Himalayan Mts.
7. Yunnan-Guizhou Plateau
8. southeast hills
9. Nanling Mts.
10. Sichuan Basin
11. Qinling Mts.
12. Yangtze Lowland Plain
13. North China Plain
14. Loess Plateau
15. Inner Mongolian Plateau
16. Northeast Plain
17. Lesser Hinggan Mts.
18. Greater Hinggan Mts.

Reference: China Handbook Series GEOGRAPHY, 1983.

Figure 4-9: China's landform regions

0 125 250 500 mls.
0 200 400 800 kms.

KEY

Major Landforms

1. Junggar Basin
2. Tianshan Mts.
3. Tarim Basin
4. Kunlun Mts.
5. Tibetan-Qinghai Plateau
6. Himalayan Mts.
7. Yunnan-Guizhou Plateau
8. southeast hills
9. Nanling Mts.
10. Sichuan Basin
11. Qinling Mts.
12. Yangtze Lowland Plain
13. North China Plain
14. Loess Plateau
15. Inner Mongolian Plateau
16. Northeast Plain
17. Lesser Hinggan Mts.
18. Greater Hinggan Mts.

• Focus Unit Capitals & Special Cities

Reference: China Handbook Series GEOGRAPHY, 1983.

Figure 4-10: China's landform regions by Geographic Regions

In this region, there are many scenic attractions. Among the most notable are unusual, steep-sided hills in the Guangxi autonomous region. Such hills occur in the vicinity of the city of Guilin. They are ***karst*** hills and rock ***pinnacles*** that seems to have been thrust out of the plains along the Li River (Figure 4-11). These landform features have inspired awe for centuries. Chinese artists have tried to recreate their images in paintings and poetry. Other attractions are fishing villages between coastal mountains and the sea.

The Southeast Lowland Region has productive cropland. The southernmost part of this region produces tropical products such as bananas and pineapples. **The major industrial city in this region is Canton.**

karst (kärst) . . . . . *In China, limestone hills that are narrow and tall. They are common in the Guilin area of Guangxi province.*

pinnacle (pin'ə kəl) . . . . . *A pointed, towering formation often of rock.*

Figure 4-11: Karst hills along Li River, Guilin, Guangxi, China

2. Yangtze Lowland Region

The Yangtze Lowland Region is a plain named after the river that winds through it. In addition to the great expanse of flat land, there are also mountains, hills and hillocks. It is criss-crossed by rivers, streams and canals and dotted with lakes and ponds (Figure 4-12).

Figure 4-12: Yangtze Lowland Plain near Suzhou, Jiangsu, China

This region is called "the land of rice and fish". Other than miles of rice paddies and thousands of fish ponds, there are wheat and cotton fields and mulberry orchards. Silk worms eat the mulberry leaves before they spin their cocoons. Sericulture was highly developed early in China and is an old and exacting industry.

Bamboo forests and tea terraces cover parts of Zhejiang province. **Four major industrial cities located in this region are Shanghai, Hangzhou (in Zhejiang province), Nanjing (in Jiangsu province) and Wuhan (in Hubei province).**

3. Sichuan Basin Region

The Sichuan Basin Region consists of the Sichuan Basin and surrounding high mountains (Figure 3-7 on page 65). In this basin are scattered low mountains, hills and hillocks separated by plains. In places the plains are quite large, like the Chengdu Plain in the western corner of the basin.

The Sichuan Basin is also called "The Red Basin" or "The Purple Basin". Its sandstone hills and hillocks are reddish-purple. The contrast of the green crops and trees against the reddish-purple soil is a spectacular sight.

The Sichuan Basin Region is one of China's greatest crop producing areas because of the ideal conditions to grow crops. Sugarcane, tangerines, teas and silk are produced in addition to rice. **The major industrial cities in this region are Chengdu and Chongqing, both in Sichuan province.**

4. Yunnan-Guizhou Plateau Region

The Yunnan-Guizhou Plateau Region is dominated by the rugged Yunnan-Guizhou Plateau. On this plateau are mountains, canyons, hills, lakes, valleys, small basins and waterfalls (Figure 4-8 on page 94). In places, limestone rock mountains create spectacular scenery. Some steep mountain sides are almost vertical rock pinnacles, some reach 600 feet (200 m.) above the valleys.

In this region some parts of the plateau have gently rolling terrain good for agriculture. There is also irrigated grain farming. **The major industrial city in this region is Kunming in Yunnan province.**

(N) B. North China

- What are the names of the landform regions in North China?
- What is the main crop grown in North China?
- What are the main landform features of each region?
- What major industrial cities are in each region?

North China has three landform regions. They are the North China Plain, Northeast Plain, and Loess Plateau Regions (Figure 4-10 on page 99). **Wheat is the major crop grown in North China.**

(N) 1. North China Plain Region

This region is named after the North China Plain. Some of the flattest land in China is found here. A common sight is to see tractors and machines harvesting the wheat (Figure 3-8 on page 67).

The North China Plain produces the crops needed to feed the millions of Chinese people living on this plain. It is one of the earliest cultivated areas in China. Like Sichuan, this region is one of China's most productive grain growing areas. Also, it is one of the world's most productive areas. **Beijing and Tianjin, major industrial cities, are located on the northern edge of the North China Plain.**

2. Northeast Plain Region

The Northeast Plain Region consists of the Northeast Plain and the Lesser Hinggan Mountains. The plain is rolling or fairly flat land and the black and brown-colored soils are fertile. The Lesser Hinggan Mountains are covered with thick forests. The trees include Korean pines and spruce. Many fur-bearing animals, such as the Northeast China tigers, sables, otters and silka deer live in these forests.

The warm growing season is short in this northern location. Therefore, only one crop is grown on any field each year. The crops grown include wheat, corn and soybean. **The major industrial cities are Shenyang (in Liaoning province), Changchun (in Jilin province) and Harbin (in Heilongjiang province).**

3. Loess Plateau Region

The Loess Plateau Region is made up of the Loess Plateau and the Qinling Mountains. This region is named after a special type of fertile soil called *"loess"*. Much of the Loess Plateau is made up of layers of loess soil averaging 300 feet (100 m.) deep. In western Gansu it may be as deep as 600 feet (200 m.). The Qinling Mountains are rugged mountains that make up a natural dividing line between North and South China. In the next two chapters, the Qinling Mountains are described in more detail.

loess (lō'is) ..... *A wind-carried deposit of fine soil. In China, the soil is yellow and grainy.*

The loess soil has played a major part in this region for centuries. It has been carried by the winds from the northern deserts. The soil particles have the ability to create steep, and in some places, cliff-like slopes. The loess soil is grainy. Frequent summer rainstorms can cause serious soil *erosion* where there is sparse vegetation. In the outer areas of the plateau, rainwater has carved so many gullies into the land that the landscape looks hilly. In the center of the plateau the land surface is fairly level over large areas.

The loess is so deep that many cave houses have been dug into it. These dwellings can be quite comfortable since the loess retains heat in the winter and coolness in the summer.

erosion (i rō'zhən) . . . . . The process of eating or wearing away of soil.

Hardy crops, like wheat, can grow well here with enough rainfall or irrigation (Figure 4-13). Terracing has been going on for centuries. An interesting sight is to view the crops growing on top of the cave houses. **The major industrial city in this region is Xi'an in Shaanxi province.**

Figure 4-13: Farming on Loess Plateau, Shanxi, China

C. West China

- What are the names of the landform regions of West China?
- What is the major land use in West China?
- What are the main landform features of each region?
- What major industrial cities are in each region?

West China has three landform regions. They are the Inner Mongolian Plateau, Xinjiang, and Tibetan Highland Regions (Figure 4-10 on page 99). **The land use in these regions consists mostly of animal husbandry. Where crop farming occurs, it is mostly in the valleys of Tibet, in the scattered oases on irrigated tracks of land in Xinjiang and in southern areas of Inner Mongolia. Like North China, the major crop grown in this region is wheat.**

1. Inner Mongolian Plateau Region

The Inner Mongolian Plateau Region consists of the Inner Mongolian Plateau and the Greater Hinggan Mountains. The plateau stretches across north China from Heilongjiang to Gansu provinces. Sixty per cent (60%) of this region is flat and rolling grassland. The grass is shorter and sparser in the western part than in the eastern part. The southern edge is cropland. West of the grasslands are shallow basins with deserts. The deserts are covered with drifting sand dunes, salt lakes and salt marshes. The Greater Hinggan Mountain range is covered with forests including larch and white birch trees.

Figure 4-14: Mongol horse woman during roundup, Inner Mongolia, China

The plateau's land is used for pasture land with some cropland and forest land. The grassland of the eastern part is famous for fine breeds of Sanho horses used for riding and harnessing. In fact, Inner Mongolia is China's leading livestock farming area (Figure 4-14). The grassland in the western part supports sheep and camels (Figure 3-9 on page 69). The southern edge is dotted with irrigated wheat fields. There is little land use in the desert. The Greater Hinggan Mountain range is the country's leading natural forest area. **The major industrial city is Hohhot, capital of Inner Mongolia.**

2. Xinjiang Region

The Xinjiang Region consists of the Tarim and Junggar Basins separated by the Tianshan Mountains. This region is mostly desert (Figure 4-15). In fact, Xinjiang's deserts make up 60 per cent (60%) of China's total desert territory. The centers of the large basins in this region are deserts. The deserts are dotted with salt lakes, marshes and spots where grass grows temporarily for a few weeks or months after infrequent rainfall. Circling the deserts are rocky foothills. Surrounding the foothills are mountains.

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Figure 4-15: Desert, Xinjiang, China

The Tarim Basin is China's largest basin. It covers 530,000 sq. miles (1,373,000 sq.k.). It is shaped like an irregular diamond. In the center is the Taklamakan Desert. It is covered with drifting sand dunes (85%) and scattered salt lakes. It is China's largest desert 126,000 sq. miles (327,000 sq. k.). To the north are the Tianshan Mountains and to the south are the Kunlun Mountains.

The Junggar Basin is shaped like an irregular triangle. The center is a desert. Like the desert of the Tarim Basin, there are sand dunes and salt lakes. Urumqi is located on its southern edge.

The Tianshan Mountains are covered with forests and grasslands (Figure 4-5 on page 88). Spruce forests grow on parts of its northern slopes. These high, rugged mountains are hard to cross, unless traveled through one of two major passes. The land in this region is not very useful. Small amounts of land are used as cropland, pasture land and forest land.

Since both basins are mostly desert, crop farming depends on stream and well water and on irrigation canals in the oases. Pears, apples, wheat, corn and cotton are among the crops grown. The oases are scattered around the edges of the deserts. Xinjiang sheep graze on the grass in the foothills of the surrounding mountains. These sheep are noted for their fine wool. Due to their large size, they provide a lot of mutton. Forests grow on the middle elevations of the mountains. Antelopes, wild horses and camels roam Xinjiang.

The Junggar Basin is the most developed area in Xinjiang. **In this region Urumqi is becoming an industrial city.**

3. Tibetan Highland Region

The Tibetan Highland Region is made up of the Tibet-Qinghai Plateau and two high mountain ranges. It is bordered on its north by the Kunlun Mountains and on its south by the Himalayan Mountains.

The Tibet-Qinghai Plateau is the largest and highest plateau in the world between 1,500 and 1,950 feet (4,000 and 5,000 m.) in elevation. This is why it is often called "the roof of the world". Many think of this plateau as the most remote area on earth. Its territory includes all of Tibet and Qinghai, parts of western Sichuan and southwest Gansu. The Tibet-Qinghai Plateau's rough surface is cut deeply by river valleys.

Both mountain ranges are among the highest in China. The Kunlun Mountains are scenic with snow-capped peaks. The Himalayan Mountains are the highest mountains in the world. They are a series of parallel ranges, stretching along the southern Tibetan border. "Himalayan" means "abode of snow" in Tibetan. Mountain climbers come from all over the world to scale the highest peak, named Mt. Everest. It is a little over 29,000 feet (8,840 m.) high.

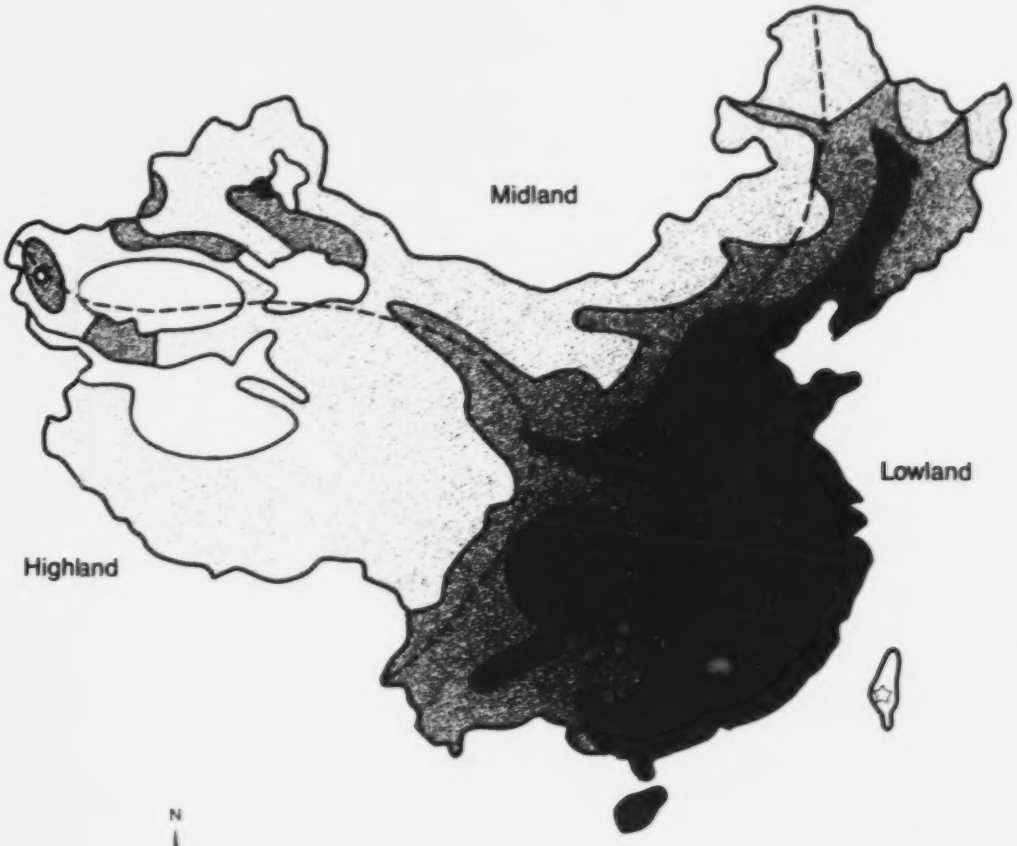
The Tibetan Highland Region supports scattered pasture land and cropland. On the Tibetan-Qinghai Plateau there are some valleys, lakesides and gentle slopes, that support some animal husbandry. The Chinese people raise sheep, yaks and horses. The Tibetan yaks are a major means of transportation. They are noted for their adaptability to cold climates and their stamina. The southern part of this region supports more crop farming than the northern part. The Chinese people farm in the valleys, raising crops such as barley, rye and peas. Some of the water needed for farming comes from the melting snows of the surrounding mountains. **Lhasa is developing as an industrial center.**

4.5 Population Distribution

- What are the population densities of the Lowland, Midland and Highland?
- What are the population densities of China's mountain, plateaus, basins, hills and plains?

China's landform features strongly influence where the Chinese people live and how many live there. Relate population densities to the topographic staircase (Figure 4-16). **In China, as in many countries, the higher the elevation and the rougher the surface of a landform, the fewer the people. Overall, the Lowland is densely and very densely populated.** The Midland has all categories of population distribution, except uninhabited. The Highland has very sparsely populated and uninhabited areas.

Consider the relationship between China's landforms and population densities (compare Figures 4-7 on page 93 and 4-16). Many people live on the plains and valleys of the Lowland. For example, both the North China Plain and the Yangtze Lowland Regions with their fertile cropland, are very densely populated. The plateaus, basins and high mountains of the Midland have a wide range of population densities. The Sichuan Basin, part of the Loess Plateau, the Urumqi area and part of the Tarim Basin support very dense populations. The high mountains and plateaus in the Highland are very sparsely populated. A good example of a sparsely populated area is the Himalayan Mountains.



0 125 250 500 mls.
0 200 400 800 kms.

KEY		Persons: Square miles	Persons: Square kilometers
VERY DENSE		over 500	over 200
DENSE		250-500	100-200
SPARSE		25-249	10-99
VERY SPARSE		1-24	1-9
UNINHABITED		0	0
Information Not Available	☆		

Reference: THE TIMES ATLAS OF CHINA, 1974.

Figure 4-16: China's population distribution by topographic staircase

4.6 Geographic Regions and Focus Units

- What are the relationships between landforms and population distribution in South China, North China and West China?

Most of South China's landforms support dense or very dense populations (Figure 4-10 on page 99 and Figure 4-16). Many people live in the Southeast Lowland, Yangtze Lowland and Sichuan Basin Regions. The basins, valleys, hills and plains are ideal for raising crops. **The cities of Canton, Chengdu and Shanghai are located in these regions.** (S)

North China is also densely or very densely populated. Many people live on the plains and plateaus partly because the landform features make good cropland. Of the three landform regions of North China, the North China Plain is the most densely populated. **Beijing and Xi'an are part of these regions.** (N)

The landforms in West China are very sparsely populated. The high plateaus and lower elevations of the high mountains in Xinjiang and the Tibetan Highland Regions support mostly animal husbandry. **Urumqi is one of the densely populated areas due to cropland in the oases. Lhasa, being on the Tibet-Qinghai Plateau, is very sparsely populated.** (W)

4.7 Summary

As a geographer you now know about China's landforms. You can describe the landforms and their land use. You can also describe the 10 landform regions and how they affect where the Chinese people live and how many live there. Finally, you have learned the comparisons between the landforms of China and the United States.

Think of China's topography as a giant three-step, east-west staircase. The bottom step, called Lowland, is in the eastern part of China. The middle step, called Midland, extends through central and northwest China. The top step, called Highland, rises in the southwestern part of the country. China's topography steps up from the eastern coastline to the western mountains.

China's landform features, like those of many countries, are varied over its territory. China has five major type of landforms: mountains, plateaus, basins, hills and plains. Most of China's land surface in the western and central parts is rough and high in elevation.

China has many mountain ranges. The high mountains in the Midland and Highland described in the book are the Greater Hinggan, Himalayan, Kunlun, Qinling and Tianshan Mountains. The two low mountains, in the Lowland, described in the book are the Lesser Hinggan and Nanling Mountains. China's mountain ranges tend to run east-west. The exception is the Greater Hinggan range which runs north-south. China's mountains are used for cropland, pasture land and forest land. In general, the higher the elevation and the rougher the surface of a landform the more difficult the farming.

China's major plateaus are located in the Midland and Highland. The four major plateaus are the Inner Mongolian, Loess, Tibet-Qinghai and Yunnan-Guizhou Plateaus. China's plateaus support two types of land use — cropland and pasture land. China's plateaus are the leading stock raising areas of the country.

China's three basins are in the Midland. They are the Sichuan, the Junggar and the Tarim Basins. Parts of the basins are used for cropland and pasture land.

Hills are formed in most parts of China on all three steps of the topographic staircase. The hills described in the book are called the southeast hills. China's southeast hills are heavily farmed.

Most of China's plains are in the Lowland. The three major plains are the Northeast, the North China and the Yangtze Lowland Plains. China's plains, like plains in many countries, produce more crops than other types of landforms.

There are similarities and differences between the land uses of China's and the United States'; landforms: plains and farming. There are two differences between the landforms of China and the United States: number of basins and the amount of forestry.

This book divides China into 10 landform regions. Each landform region has its own features.

South China has four landform regions: the Southeast Lowland, Yangtze Lowland, Sichuan Basin, and Yunnan-Guizhou Plateau Regions. Rice is the main crop grown in South China.

The Southeast Lowland Region consists of fertile valleys separated by hills and low mountains and noted for its hilliness. This region has productive cropland. The major industrial city in this region is Canton.

The Yangtze Lowland Region is a plain named after the river that winds through it. This region is called "the land of rice and fish". Four major industrial cities located in the region are Shanghai, Hangzhou (in Zhejiang province), Nanjiang (in Jiangsu province) and Wuhan (in Hubei province).

The Sichuan Basin Region consists of the Sichuan Basin and surrounding high mountains. The Sichuan Basin Region is one of China's greatest crop producing areas because of the ideal conditions to grow crops. The major industrial cities in this region are Chengdu and Chongqing, both in Sichuan.

The Yunnan-Guizhou Plateau Region is dominated by the rugged Yunnan-Guizhou Plateau. Some parts of the plateau have gently rolling terrain good for agriculture. The major industrial city in this region is Kunming in Yunnan province.

North China has three landform regions: North China Plain, Northeast Plain, and Loess Plateau Regions. Wheat is the major crop grown in North China.

The North China Plain Region is named after the North China Plain. It produces the crops needed to feed the millions of Chinese people living on this plain. Beijing and Tranjin are major industrial cities located on the northern edge of this plain.

The Northeast Plain Region consists of the Northeast Plain and the Lesser Hinggan Mountains. The warm growing season is short in the northern location. The major industrial cities are Shenyang (in Liaoning province), Changchun (in Jilin province) and Harbin (in Heilongjiang province).

The Loess Plateau Region is made up of the Loess Plateau and the Qinling Mountains. Hardy crops, like wheat, can grow well here with enough rainfall or irrigation. The major industrial city in this region is Xi'an in the Shaanxi province.

West China has three landform regions: the Inner Mongolian Plateau, Xinjiang, and Tibetan Highland Regions. The land use consists mostly of animal husbandry. Crop farming occurs in the valleys of Tibet and in scattered oasis on irrigated tracks of land in Xinjiang. Like North China, wheat is the major crop grown in this region.

The Inner Mongolian Plateau Region consists of the Inner Mongolian Plateau and the Greater Hinggan Mountains. The plateau's land is used for pasture land with some cropland and forest land. The major industrial city is Hohhot, capital of Heilongjiang province.

The Xinjiang Region consists of the Tarim and Junggar Basins separated by the Tianshan Mountains. Since both basins are mostly desert, crop farming depends on stream and well water and irrigation canals in the oasis. In this region, Urumqi is becoming an industrial city.

The Tibetan Highland Region is made up of the Tibet-Qinghai Plateau and two high mountain ranges. It is bordered on its north by the Kunlun Mountains and on its south by the Himalayan Mountains. The Tibetan Highland supports scattered pasture land and cropland. Lhasa is developing as an industrial center.

China's landform features strongly influence where the Chinese people live and how many live there. In China, as in many countries, the higher the elevation and rougher the surface, the fewer the people. Overall the Lowland is densely and very densely populated.

Most of South China's landforms support dense or very dense populations. The cities of Canton, Chengdu and Shanghai are located in these regions. North China is also densely and very densely populated. Beijing and Xi'an are part of these regions. The landforms in West China are very sparsely populated. Lhasa, being on the Tibet-Qinghai Plateau, is very sparsely populated.

5
河流
Waterways

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Vocabulary and Definitions

1. *aquaculture (ak'wəkul'chər)* ..... *The growing of water products under artificial conditions, such as breeding fish in ponds. p. 125.*
2. *course (kōrs)* ..... *The path of a river. p. 134.*
3. *delta (del'tə)* ..... *Usually a fan-shaped formation of earth collected at the mouth of a river. Many of the major deltas of the world are extensively cultivated and support dense populations of farmers. p. 134.*
4. *dike (dīk)* ..... *A barrier for holding back the waters of a river or sea. p. 128.*
5. *engineering feat (en'jə nir'ing fēt)* . *An accomplishment making practical use of scientific knowledge in the engineering field. p. 138*
6. *hydroelectric (hī'drō i lek'trik)* .... *Electricity produced by harnessing the power of falling water. p. 124.*
7. *junk (jungk)* ..... *A Chinese sailing ship. p. 138.*
8. *local transportation (lō'kəl tran'spər tā'shən)* ..... *Carrying goods a short distance. p. 139.*
9. *reach (rēch)* ..... *An unbroken stretch of a river between two bends. "Upper" reaches refer to those at the source (beginning) of a river. "Middle" reaches are those in the middle of the river. "Lower" reaches refer to those near the mouth (end) of the river. p. 134.*
10. *reservoir (rez'ər vwär)* ..... *A human-made lake that stores water. p. 128.*
11. *river system (riv'ər sis'təm)* ..... *Several rivers located in the same vicinity. p. 134.*
12. *silt (silt)* ..... *Fine, loose earth material that is carried by moving water and deposited as sediment. p. 124.*
13. *tributary (trib'yə ter'ē)* ..... *A stream that flows into a larger stream. p. 134.*
14. *turbine (ter'bin)* ..... *A machine with movable blades. By forcing water against the blades, electricity can be generated. p. 126.*

5.1 Introduction

An important geographic factor in any country is its waterways. In this chapter, your focus as a geographer, is to study how **China's waterways influence where the Chinese people live and how many live there.** First, consider the waterways nearest to you. Are there seas, rivers, streams, lakes or canals near your home? How do these waterways benefit you? Do you use them for pleasure or work?

In this chapter you are going to look at seven aspects of China's waterways. First, you are going to find out about the benefits they provide. Second, flooding is discussed. Third, you will study the directions of China's major waterways. Fourth, you will learn about China's major waterways — rivers, coastals waters, a canal and freshwater lakes. Fifth, you will compare the northern and southern rivers in China to find out why the southern rivers provide more benefits than the northern rivers. Sixth, you will analyze how China's waterways affect population distribution. Lastly, China's waterways are described by Geographic Regions and Focus Units.

As you read, look for comparisons between the waterways of China and the United States. Why is the Mississippi River like the Yangtze River? Is the direction of the major river systems in both countries the same?

The questions at the beginning of each topic are your guideposts. Answer these questions by locating the main information in bold type throughout the chapter. Once you know the answers you have mastered the basic facts about China's waterways.

5.2 Benefits

- What are the benefits of China's waterways?

Waterways are an important resource for any country. They provide many benefits. **Water is useful for drinking and irrigation, transportation, fishing and *hydroelectric* power. Rivers provide another benefit of *silt* and mud used for fertilizer.** This is especially true in China.

China's rivers and lakes provide water for drinking and for irrigation. The Chinese built canals and ditches to carry water from rivers and lakes to their fields. Irrigation increases the productivity of farm land.

China's waterways provide transportation routes. Boats moving on rivers, canals and coastal waters are a major means of transport within China. Goods have been shipped by water for centuries. **This is still the cheapest method of long distance transportation.** Many of China's major cities are located on waterways. For example, the port cities of Shanghai, Wuhan, Tianjin and Canton have become important urban centers for trade and transportation.

Another use of China's waterways is for fishing. Fish provide both food and fertilizers. Fishing is a major industry in China. The Chinese people fish in lakes, rivers, canals and coastal waters of the ocean. China is the world's largest producer of freshwater fish.

silt (silt) ..... *Fine, loose earth material that is carried by moving water and deposited as sediment.*

hydroelectric (hī'drō i lek'trik) .... *Electricity produced by harnessing the power of falling water.*

In China, fish are both caught and raised. Traditionally, the Chinese people have caught fish using nets and hook-and-lines in all types of water (Figure 5-1). The more modern method is "raising" fish. They raise fish in human-made ponds just as someone else might raise chickens on land. This practice is called *aquaculture*.

Figure 5-1: Fishing with nets, Guangdong, China

aquaculture (ak' wa kul' chur) ..... The growing of water products under artificial conditions, such as breeding fish in ponds.

Waterways can be energy sources. Water flowing over a natural waterfall or a human-made dam can provide energy to make electricity. Hydroelectric power is made by directing the falling water through *turbines* (Figure 5-2). In China the sharp drop in the landform features from Highland to Lowland creates rushing waters. The Chinese have built thousands of dams to harness this energy source to increase irrigation and to prevent floods.

The last benefit China receives from its waterways is silt. Silt sinks to the bottoms of the rivers and canals when the water slows down. It is often very rich in materials that help plants grow. The Chinese dig the silt out of river and canal beds to fertilize their fields.

turbine (ter'bin) . . . . . *A machine with movable blades. By forcing water against the blades, electricity can be generated.*

Figure 5-2: Hydroelectric power plant, Guizhou, China

5.3 Flooding

- Why is flooding of rivers a major problem in China?
- How are lakes used for flood control?

Flooding along the banks in the middle and lower reaches of many rivers is a major problem which has plagued China for centuries. Flooding is most devastating along the Yellow, Huai and Yangtze Rivers. Rising flood waters may be caused by melting snow in the spring or by unusually large amounts of rain. A buildup of silt deposits in the river beds is another factor contributing to floods.

The central government continually works to control flooding. The government has built *dikes*, canals and *reservoirs*. As the river waters reach flood levels, canals divert the excess water into lakes, reservoirs and other canals. These measures have made flooding much less of a threat.

dike (dīk) . . . . . *A barrier for holding back the waters of a river or sea.*

reservoir (rez'ər vwär) . . . . . *A human-made lake that stores water.*

5.4 Directions of China's Waterways

- What are the names of China's major rivers that flow west to east?
- Where are these major rivers located?
- What are China's north-south waterways?
- Where are these north-south waterways located?
- How do the directions of China's waterways compare with those of the United States?

China's major rivers flow west to east. They are the Yangtze, Yellow and Xi/Pearl Rivers (Figure 5-3). **They run from the Highland or Midland in the west to the Lowland in the east. China does not have a major river that runs north-south. The north-south waterways are the coastal waters of the east coast and the Grand Canal in the Lowland.**

The directions of the waterways in the United States can be compared to those in China. Unlike the situation in China, the major river in the United States, the Mississippi, flows north to south. As in China the coastal waters extend north to south. The United States also has east-west coastal routes in the Gulf of Mexico.

KEY

Huebi Province
(Province of 1,000 lakes)

• Major Port Cities along Yangtze River

* mouth of the Huai River as shown is one of several outlets

Figure 5-3: China's major waterways

5.5 East-West Waterways

China has three major river systems. The rivers flow west to east. They are the Yangtze, Yellow and Xi/Pearl Rivers.

A. The Yangtze River

- How long is the Yangtze River?
- What are the benefits of the Yangtze River?
- What is the major drawback of the Yangtze River?

The Yangtze is the longest river in China and the fourth longest river in the world (Figure 5-4). It is said to be between 3,400 and 3,950 miles long (5,500 and 6,300 km.) (Figure 5-5). On many maps, its Chinese name, Chang Jiang, is used. "Jiang" means river in South China.

Rank	River	Country	Length in miles	Length in kilometers
1	Nile	Egypt	4,132	6,611
2	[illegible]	[illegible]	[illegible]	[illegible]
3	Ob-Irtysh	Soviet Union	3,461	5,538
4	[illegible]	[illegible]	[illegible]	[illegible]
5	Mississippi	United States	2,348	3,757

Reference: RAND McNALLY GOODE'S WORLD ATLAS (16th edition), 1983.

Figure 5-4: The five longest rivers in the world

Western name	Yangtze	Yellow	Xi/Pearl
Chinese name	Chiang Jiang	Huang He	Pearl:Zhu
Location	central China	northern China	southeast China
Geographic Region	South China	North China	South China
Length in miles	3,912	3,393	1,364
Length in kilometers	6,300	5,464	2,197
Rank in length in China	1st	2nd	4th*
Course			
- origin	Kunlun Mts. in Qinghai province	Kunlun Mts. in Qinghai province	Wuemeng Mts. in Yunnan province
- governing units it passes through	• Qinghai • Tibet • Sichuan • Yunnan • Hubei • Hunan • Jiangxi • Anhui • Jiangsu	• Qinghai • Sichuan • Gansu • Ningxi • Inner Mongolia • Shaanxi • Shanxi • Henan • Shandong	• Yunnan • Guizhou • Guangxi • Guangdong
- empties into	East China Sea	Yellow Sea	South China Sea
Lowlands densely populated	yes	yes	yes

* the third longest river is the Heilong River in Heilongjiang province (1,841 miles/2,965 kilometers)

Reference: China Handbook Series, GEOGRAPHY, 1983.

Figure 5-5: China's major rivers

The Yangtze runs through central China (Figure 5-3). The river changes its appearance along its *course*. At its source, in Qinghai province in the Tibetan Highland, it rushes through steep canyons. In its upper *reaches* it continues to roll through the narrow valleys and deep gorges of Yunnan and Sichuan. The Yangtze gorges are popular tourist attractions. Nearer the end of its course, it meanders slowly across lowlands. The Yangtze *delta* is laced with *tributaries* and estuaries, crossed with an extensive canal network and dotted with lakes.

The Yangtze River is a major transport route. This river and some of its 700 tributaries are navigable. The Yangtze has the highest volume of water traffic of any Chinese waterway. Ships travel between the major ports of Shanghai, Nanjing, Wuhan, Chongqing and many smaller ports (Figures 5-3 and 5-6). During the high-water season, large ships can travel from the East China Sea 600 miles (960 km.) inland to Wuhan. Upstream, the river is more shallow. Only smaller ships can travel further inland.

© Janet Woodcook, 1985

Figure 5-6: Port at Shanghai, China

The Mississippi River is the major river system in the United States. It can be compared to the Yangtze River system. Unlike the Yangtze, the Mississippi flows north to south. It empties into the Gulf of Mexico. Like the Yangtze, the tributaries of the Mississippi form a network over much of the central part of the country.

The fishing industry thrives along the Yangtze. The Yangtze is China's major source of freshwater fish. Thousands of tons of fish are caught here every year.

The Yangtze River *system* is potentially a major source of hydroelectric power. Small hydroelectric power stations have been built along the banks of some of its tributaries. One major station is partially constructed in the middle reach of the Yangtze in Hubei province. The main river, along most of its middle reaches and all of its lower reaches, is so wide that there are major difficulties of dam construction. The central government is working toward harnessing more of the Yangtze's hydroelectric power potential.

course (kōrs) . . . . . *The path of a river.*

reach (rēch) . . . . . *An unbroken stretch of a river between two bends. "Upper" reaches refer to those at the source (beginning) of a river. "Middle" reaches are those in the middle of the river. "Lower" reaches refer to those near the mouth (end) of the river.*

delta (del'tə) . . . . . *Usually a fan-shaped formation of earth collected at the mouth of a river. Many of the major deltas of the world are extensively cultivated and support dense populations of farmers.*

tributary (trib'yə ter'ē) . . . . . *A stream that flows into a larger stream.*

river system (riv'ər sis'təm) . . . . . *Several rivers located in the same vicinity.*

Flooding is a major drawback for people living along the Yangtze River. Over the centuries terrible floods have occurred along its middle and lower reaches. One such flood took place in 1931. This happened in the area around Wuhan, a large city in Hubei province (Figure 5-3). Even though dikes had been built, they were not able to hold back the onrushing water. The entire city and much of the surrounding rural area was four to eight feet (1.2 and 2.4 m.) under water. More than 100,000 people drowned. Twenty-five million people in the rural areas were driven from their homes. This was one of the worst disasters in world history. In 1934 Wuhan was saved from a similar disaster. This time, the flood waters were controlled by the 60 foot (18 m.) high dikes.

B. The Yellow River

- How long is the Yellow River?
- Where is the Yellow River located?
- How are the benefits of the Yellow and Yangtze Rivers similar?
- Why has the Yellow River been called "China's Sorrow"?

The Yellow River is the second longest river in China (Figure 5-5). Its Chinese name is Huang He. In North China "huang" means "yellow" and "he" means "river".

The Yellow River flows through northern China (Figure 5-3). Like the Yangtze, the Yellow River starts in Qinghai province (Figure 5-4). The Yellow River also changes its appearance on its way to the Yellow Sea. It flows slowly through the grasslands of Qinghai province. It picks up speed in the Midland gorges. Hydroelectric power stations can be built along this section of the Yellow River. By the time it reaches the Lowland of the North China Plain, it is thick with silt and flows sluggishly.

The Yellow River changes in another way. In the Highland, the water is clear. As it passes through Inner Mongolia and the Loess Plateau it becomes muddy. The water picks up the yellow, grainy soil of the region. The tiny yellow particles of soil become suspended in the flowing water and change the color of the river. This is how the river got its name.

One curious fact about the Yellow River is that parts of it on the North China Plain are in a sense "above ground". Each year the river bed rises a tiny bit from the silt that drops and stays on its bed. Over the years, the river bed has risen so high that it must be artificially contained in high dikes. In some places, the Yellow River is 30 feet (10 m.) above the level of the land on either side of it. These dikes help minimize the flooding of the land.

The Chinese people living along the Yellow and Yangtze Rivers receive three similar benefits from their rivers. First, the water is used for drinking and irrigation. The Yellow River has been a source of irrigation since the Qin dynasty (third century B.C.). **Second,** both rivers are a good source of fish. **Third,** hydroelectric power can be generated along their upper and middle reaches and tributaries.

The Yellow and Yangtze Rivers differ in their usefulness as long-distance water routes. While the Yangtze is heavily traveled, only the lower reaches of the Yellow River are navigable.

The Yellow River also has a history of flooding. The flooding has been so harmful, that the river has been called "China's Sorrow". Today, the flooding of the Yellow River is being controlled. Reservoirs and spill-off lakes have been created along the river in the upper and middle reaches to catch and hold some of the river's water where there is danger of flooding downstream.

C. The Xi/Pearl River

- How long is the Xi/Pearl River?
- Where is the Xi River located?
- Where do the Xi and Pearl Rivers join?
- What are the similar benefits of the Xi/Pearl and Yangtze Rivers?
- What is the problem with the Xi/Pearl River?

The Xi/Pearl River is the longest river in southeast China (Figure 5-3). On some maps, it is only called the Pearl River. However, it is made up of many rivers. The Xi River is the source of this river system. "Xi" means "west" in Chinese. It is also spelled "Si" or "Hsi" on maps. The Xi River winds its way from Yunnan province to Guangdong province. Near Canton, the Xi River joins with other rivers to form the Pearl River. The Pearl River flows south through a delta emptying into the South China Sea.

The Chinese people living along the Xi/Pearl and the Yangtze Rivers receive four similar benefits from their waterways. First, both are major transport routes because both are navigable over much of their courses. The Xi/Pearl has the second highest volume of river traffic in China. **Second,** fish thrive in both rivers. **Third,** both rivers have great potential as sources of hydroelectric power. In fact, the Xi/Pearl River has the second greatest potential for hydroelectric power development of all China's waterways. **Fourth,** both rivers supply irrigation water for nearby farm land.

The Xi/Pearl River has one major problem. Like the Yangtze and Yellow Rivers, severe flooding can occur on its lowland.

5.6 North-South Waterways

China has two types of waterways that extend north-south. The first is coastal water. The second is the Grand Canal.

A. Coastal Waters

- What are the two benefits of China's coastal waters?

China's coastal waters are major transport routes. Ships move along the east coast between the major ports of Tianjin, Shanghai and Canton (Figure 1-5, p. 8). Ships of varying sizes, from small fishing boats and *junks* to large oil tankers, transport goods from port to port. Deep-hulled ships from around the world can come into some of these ports.

China's coastal waters provide for an extensive fishing industry. Many fish thrive in the waters of the continental shelf as well as in the deep sea. Colorful fishing boats dotting the waters are a common sight along the coastline. The traditional wooden junk has eyes painted on its bow. These eyes watch out for evil such as choppy waters or oncoming gales. The boats have been in Chinese fishing and trading families for generations.

B. The Grand Canal

- Where is the Grand Canal located?
- What is the Grand Canal used for today?

The Grand Canal is one of China's great *engineering feats*. It compares with the Great Wall. **It was built to provide an inland north-south transport route.**

junk (jungk) ..... *A Chinese sailing ship.*

engineering feat (en'jə nir'ing fet) . *An accomplishment making practical use of scientific knowledge in the engineering field.*

The Grand Canal took a long time to build. It was started in the seventh century B.C. and built section by section. It was finished 1,400 years later in 610 A.D. The canal stretches over 750 miles (1,200 km.) and links the cities of Beijing and Hangzhou (Figure 5-3). Some sections of the Canal connect with the Yangtze, the Huai and the Yellow Rivers.

The canal was at times crucial to China's commerce, government and defense until the end of the nineteenth century. Grains and other food products were transported on the canal. The government used the canal to transport soldiers, military equipment and officials. Fees paid to use the canal were added to the imperial treasury.

Later, railroads and large ships began to take over the work of the canal boats. The canal fell into disrepair. Parts of the canal were blocked by silt. During the last several decades, sections have been restored and reopened. **Today, the Grand Canal is used mainly for *local transportation* and irrigation.**

local transportation
(lō'kəl tran'spər tā'shən) . . . . . Carrying goods a short distance.

5.7 Freshwater Lakes

- Where are China's freshwater lakes located?
- What are the benefits of China's freshwater lakes?

China has two types of lakes: freshwater and saltwater. **Freshwater lakes are located throughout China.** In South China, many lakes are found in the Southeast Lowland and the Yangtze Lowland (Figure 5-3). In North China, they are on the North China Plain and the Northeast Plain. In West China, sizable freshwater and saltwater lakes occur in places in the Xinjiang and the Tibetan Highland Regions.

Freshwater lakes offer the same benefits as other waterways. They provide water for irrigation and drinking, transportation and fishing. One of their most important functions is flood control. When the water level in rivers approaches flood levels, the Chinese people can direct some of the water into nearby lakes.

The largest lake in China is the Poyang Lake in Jiangxi province (Figure 5-3). It has an area of almost 2,000 sq. miles (5,200 sq. km.). Fish, water chestnuts, lotus roots and seeds taken from this lake are part of the Chinese cuisine. Rice and wheat grow on its shores. During the high water season, it is an important spill-off lake for the Yangtze River, helping to reduce the chance of floods.

Hubei province is called the "Province of 1,000 Lakes". It is said to have more lakes than any other province in China. **West Lake, in Hangzhou, has long been a famous vacation resort.** It was visited by emperors, and even by Marco Polo. Marco Polo, a merchant from Venice, lived in China from 1275-1292 and visited Hangzhou on official business for the emperor. He saw then, as can be seen today, the West Lake surrounded by teahouses, temples and gardens for the pleasure of tourists and officials.

5.8 Comparison of Northern and Southern Rivers

- What is the dividing line between the northern and southern rivers in China?
- What are the similarities and differences between the northern and southern rivers in China?

The northern and southern rivers in China are divided by the Qinling-Huai Line. This line, near 34°N latitude, is formed by the Qinling Mountains and the Huai River (Figure 5-3). The Qinling Mountains are the watershed between the Yangtze and Yellow River valleys. (N) (S)

In Huai River is called "the river without a mouth". It starts in the mountains of Henan province and flows into lakes in western Jiangsu province. From there, the water flows through several canals and streams to the sea. Although the Huai River has several outlets, only one is shown on the map (Figure 5-3).

Northern and southern rivers have many things in common. They are used for transportation, fishing, irrigation, drinking and fertilizer. They both can flood along their lower reaches. Northern and southern rivers differ in a number of ways. Find the differences on the chart (Figure 5-7). (N) (S)

Northern Rivers	Southern Rivers
• strong seasonal difference in water flow	• mild seasonal difference in water flow
• high water level in summer, low water level in winter	• fairly high water level throughout the year
• few tributaries	• many tributaries
• large amount of silt	• little silt
• some freeze over in winter	• do not freeze over
• some not navigable in winter	• many navigable in winter

Reference: Adapted from China Handbook Series, GEOGRAPHY, 1983.

Figure 5-7: Comparison of China's northern and southern rivers

(N) **Northern rivers are less useful during the winter months.** The water levels in the rivers vary with the seasons. Transportation is more difficult in winter than in summer due to low water levels and frozen sections of the rivers. Flooding occurs more often on the northern rivers partly because they carry larger amounts of silt.

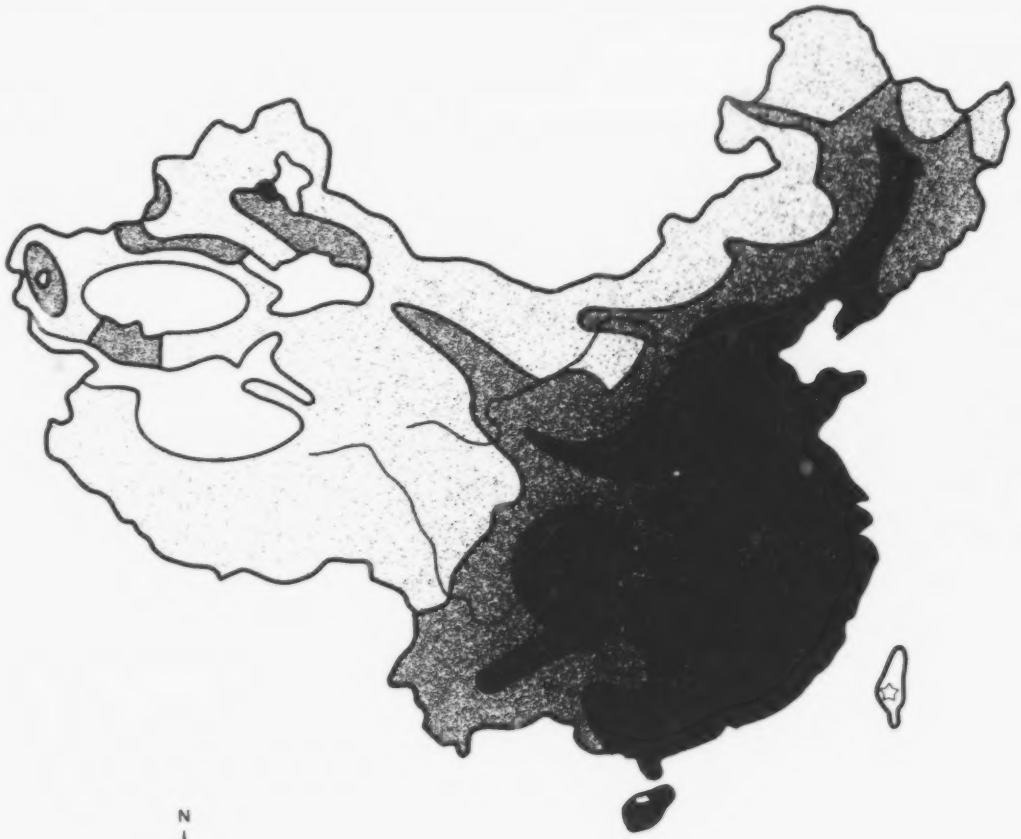
(S) **Southern rivers are more useful than those in the north.** Southern rivers maintain a higher level of water flow throughout the year. They are much less clogged with silt and never freeze. Many rivers are navigable year round. These conditions make water transport easier year round. Although they carry less silt, they flood occasionally.

5.9 Population Distribution

- What factors influence population densities near China's waterways?
- What is the population distribution near China's waterways in the Highland, Midland and Lowland?

In general, more people live near waterways than farther away from waterways. The population density near waterways varies depending not only on type of waterway but also on topography and climate. These three factors strongly influence the benefits gained from the waterways.

Compare the population densities near the waterways in relation to the topographic staircase (Figure 5-8). **Generally, the density decreases as the topography rises.** The population density changes from very dense in the Lowland to very sparse in the Highland. Many Chinese people choose to live near the waterways in the Lowland to take advantage of their benefits.



KEY

	Persons: Square miles	Persons: Square kilometers
VERY DENSE	over 500	over 200
DENSE	250-500	100-200
SPARSE	25-249	10-99
VERY SPARSE	1-24	1-9
UNINHABITED	0	0
Information Not Available		

Reference: THE TIMES ATLAS OF CHINA, 1974.

Figure 5-8: China's major rivers by population distribution

5.10 Geographic Regions and Focus Units

- How do the people from South China, North China and West China benefit from waterways?
- How do the Chinese people living in the Focus Units benefit from waterways?

(S) **The people in South China receive the greatest benefits from their waterways** (Figure 5-9). These benefits include irrigation, transportation, fishing, hydroelectric power and fertilizer. Transportation routes go both east-west and north-south. The major waterways are the Yangtze River, Xi/Pearl River, coastal waters and Grand Canal. South China has a network of waterways. **Sichuan, which means "four rivers" is a patchwork of rivers and streams. The very density of population in Guangdong, Shanghai, and Sichuan results from the many advantages the Chinese people gain from these waterways.**

(N) **The people in North China also benefit from their waterways.** Transportation and fishing occur on the coastal waters. **These benefits are part of the reason why Beijing and parts of Shaanxi are very densely populated.** There is limited travel on the Yellow River and Grand Canal.

(W) **The people in West China have fewer major waterways. Therefore, these people benefit less from waterways.** One source of water in this region is from the melting snows of mountains. This provides water for pasture land. Water is provided for cropland through irrigation. **Irrigation contributes to the very dense population in the oasis areas, such as Urumqi. In Tibet and the rest of Xinjiang the population is very sparse.**

KEY

Huebi Province
(Province of 1,000 lakes)

• Major Port Cities along Yangtze River

* mouth of the Huai River as shown is one of several outlets

Figure 5-9: China's major waterways by Geographic Regions

5.11 Summary

As a geographer you now know about China's waterways. You can describe these waterways and how they strongly influence where the Chinese people live and how many live there. Finally, you can make comparisons between the waterways of China and the United States.

Water provides many benefits. It is useful for drinking and irrigation, transportation, fishing and hydroelectric power. Rivers provide another benefit of silt and mud used as fertilizer. China's rivers and lakes provide water for drinking and for irrigation. In China, water transport is still the cheapest method of long distance transportation. Another use of China's waterways is for fishing. In China, fish are caught or raised. Waterways can be energy sources.

Flooding along the banks in the middle and lower reaches of many rivers is a major problem that has plagued China for centuries. Flooding is most devastating along the Huai, Yangtze and Yellow Rivers. The central government works continually to control flooding.

China's major rivers flow west to east. China's three major rivers are the Yangtze, Yellow and Xi/Pearl. They run from the Highland or Midland in the west to the Lowland in the east. China does not have a major river that runs north-south. The north-south waterways are the coastal waters and the Grand Canal.

The Yangtze River is the longest river in China and the fourth longest river in the world. The Yangtze runs through central China. It is a major transport route. The fishing industry thrives along the Yangtze. The river system is potentially a major source of hydroelectric power. Flooding is a major drawback for people living along the Yangtze.

The Yellow River is the second longest river in China. It flows through northern China. The Chinese people living along the Yellow and Yangtze Rivers receive three similar benefits from their rivers: water for drinking and irrigation, good source of fish and the potential for hydroelectric power. The Yellow and Yangtze differ in their usefulness as long-distance water routes. The Yellow River has a history of flooding. The flooding has been so harmful that the river has been called "China's Sorrow."

The Xi/Pearl River is the longest river in southeast China. The Chinese People living along the Xi/Pearl and Yangtze Rivers receive four similar benefits: they are major transport routes, fish thrive, both have potential for hydroelectric power and both supply irrigation water for nearby farms. Like Yangtze and Yellow Rivers, severe flooding can occur along the Xi/Pearl River.

China has two types of waterways that flow north-south: coastal waters and the Grand Canal. Coastal waters are major transport routes. They also provide for an extensive fishing industry. The Grand Canal is one of China's great engineering feats. It was built to provide an inland north-south transport route. Today, the Grand Canal is used mainly for local transportation and irrigation.

Freshwater lakes are located throughout China. They offer the same benefits as other waterways: water for drinking and irrigation, transportation and fishing. One of their most important functions is flood control. The largest lake in China is Poyang Lake in Jiangxi province. Hubei province is called the "Province of 1000 Lakes". West Lake, in Hangzhou, has long been a famous resort.

Northern and southern rivers are divided by the Qinling-Huai line. The Huai River is called "the river without a mouth". Northern and southern rivers have many uses is common: transportation, fishing, irrigation, drinking and fertilizer. They both can flood along their lower reaches. Northern rivers are less useful than the southern rivers during certain seasons of the year.

In general, more people live near waterways than farther away from waterways. The population density near waterways varies depending not only on the type of waterway but also on the topography and climate. Generally, population density decreases as the topography rises.

The people in South China receive the greatest benefits from their waterways. The high density of population in Guangdong, Shanghai and Sichuan results in part from the many advantages the Chinese people gain from their waterways. The people in North China also benefit from their waterways. These benefits are part of the reason why Beijing and Xi'an are very densely populated. The people in West China have fewer major waterways and benefit less from them. Irrigation contributes to the very dense population in the oasis areas, such as Urumqi. In Tibet and the rest if Xinjiang, the population is very sparse.

6
气候
Climates

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Vocabulary and Definitions

1. *centigrade (sen'tə grād)* . . . . *A temperature scale divided into 100 degrees. Zero degree (0°C) marks the freezing point and 100°C marks the boiling point.* p. 163
2. *Fahrenheit (far'ən hīt)* . . . . . *A temperature scale where 32 degrees (32°F) marks the freezing point and 212°F marks the boiling point.* p. 159.
3. *middle latitude area (mid'l lat'ə tüd ar'ē ə)* . . . . *An area that is located between the parallels of 30° and 60° in the northern and southern hemispheres.* p. 155.
4. *monsoon (mon sün')* . . . . . *A wind system in which the main winds change direction blowing from sea to land in the summer and land to sea in the winter.* p. 154.
5. *precipitation (pri sip'ə tā'shən)* . . . . . *Rain, mist, sleet, hail and snow. In this book it refers to rainfall.* p. 154.
6. *seasonal (sē'zn əl)* . . . . . *Relating to the seasons (fall, winter, spring, summer).* p. 161.
7. *temperature (tem'pər ə chər)* *A measure of the degree of hotness or coldness.* p. 154.

6.1 Introduction

The last major idea of this book is covered in this chapter. It is how **China's climate strongly influences where the Chinese people live and how many live there.** A geographer mostly thinks of climate in terms of temperature, rainfall and seasons. Think of how climate affects you. Do you live in a cold or warm climate? Do you live where there is a lot of rainfall or little rainfall?

China's climate is so important to the Chinese people, since so many are farmers. They need the right temperatures and rainfall to raise enough crops and animals to feed all its people. Of all the aspects that a geographer looks at to analyze population distribution, the two most critical ones are climate and topography.

In this chapter, you will first study five major factors. They are latitude, monsoons (seasonal winds), large mountain ranges, altitude and distance from the sea. Second, you will look at China's temperature patterns and summer and winter variation in eastern China. Third, precipitation levels, floods and droughts are discussed. Fourth, the climates of China and the United States are compared. Lastly, as with many chapters, you will relate China's climates to population distribution and the Geographic Regions and Focus Units.

Think about the climate of the United States. Do you know what sections are like South China's climate? Why is part of Colorado's climate like Tibet's climate?

The questions at the beginning of each topic are your guideposts. Answer these questions by locating the main information in bold type throughout the chapter. Once you know the answers you have mastered the basic facts about China's climates.

6.2 Five Major Factors

The climates of large countries vary over their territories. In China, there are different climates in different regions. **China's climates are strongly influenced by five major factors. They include latitude, *monsoons*, large mountain ranges, altitude and distance from the sea.** These factors cause China's climate to vary from cold and dry in parts of the Highland to hot and wet in parts of the Lowland. In North China, there is more variation of *precipitation* and *temperature* with the seasons than in South China.

A. Latitude

- How does latitude affect China's climates?
- Is China a low, middle or high latitude country?
- How do the latitudes of China compare with those of the United States?

Latitude affects temperature. **In general, temperatures are hotter at latitudes closer to the equator and cooler at latitudes farther from the equator.** Areas near the equator are at low latitudes and their temperatures are mostly hot. Areas further away from the equator are at higher latitudes, and their temperatures are mostly cold. **China's low latitudes are usually hotter than its high latitudes.**

Geographers commonly talk about low latitude, *middle latitude* and high latitude areas. Find out the most northern and most southern of China's latitudes (Figure 1-1, Page 4). **China is mostly a middle latitude country, but the south is in the low latitudes.**

monsoon (mon sün') ..... *A wind system in which the main winds change direction blowing from sea to land in the summer and land to sea in the winter.*

precipitation (pri sip'ə tā'shən) ..... *Rain, mist, sleet, hail and snow. In this book it refers to rainfall.*

temperature (tem'pər ə chər) *A measure of the degree of hotness or coldness.*

The United States is also mostly a middle latitude country (Figure 1-1). The temperatures of northern and southern cities in China and the United States are given in Figure 6-1.

China				United States			
City	Lat.	Temperature*		City	Lat.	Temperature*	
		Jan.	July			Jan.	July
Canton	23°N	55°F	82°F	Miami Beach, Florida	26°N	67°F	82°F
Lhasa, Tibet	30°N	28°F	61°F	Houston, Texas	30°N	52°F	83°F
Chengdu, Sichuan	31°N	43°F	79°F	Atlanta, Georgia	34°N	42°F	78°F
Shanghai	31°N	37°F	80°F	Washington, D.C.	39°N	36°F	79°F
Xian, Shaanxi	34°N	31°F	85°F	Boston, Massachusetts	42°N	29°F	73°F
Beijing	40°N	41°F	78°F	Bismark, North Dakota	46°N	8°F	71°F
Urumqi, Xinjiang	44°N	5°F	73°F				

Key: Lat. means latitude
Temperatures are the mean monthly temperatures.

References: • China: see References in Figure 6-5
• United States: THE WORLD ALMANAC AND BOOK OF FACTS 1985.

Figure 6-1: Comparison of temperatures in cities in China and the United States

B. Monsoons

- What are monsoons?
- How do monsoons influence China's climates?
- Why are the summer monsoons so important to the Chinese people?
- How do China's summer monsoons compare with the winter monsoons?

middle latitude area
(mid'l lat'ə tüd ar'ē ə) . . . . . *An area that is located between the parallels of 30° and 60° in the northern and southern hemispheres.* *p. 155.*

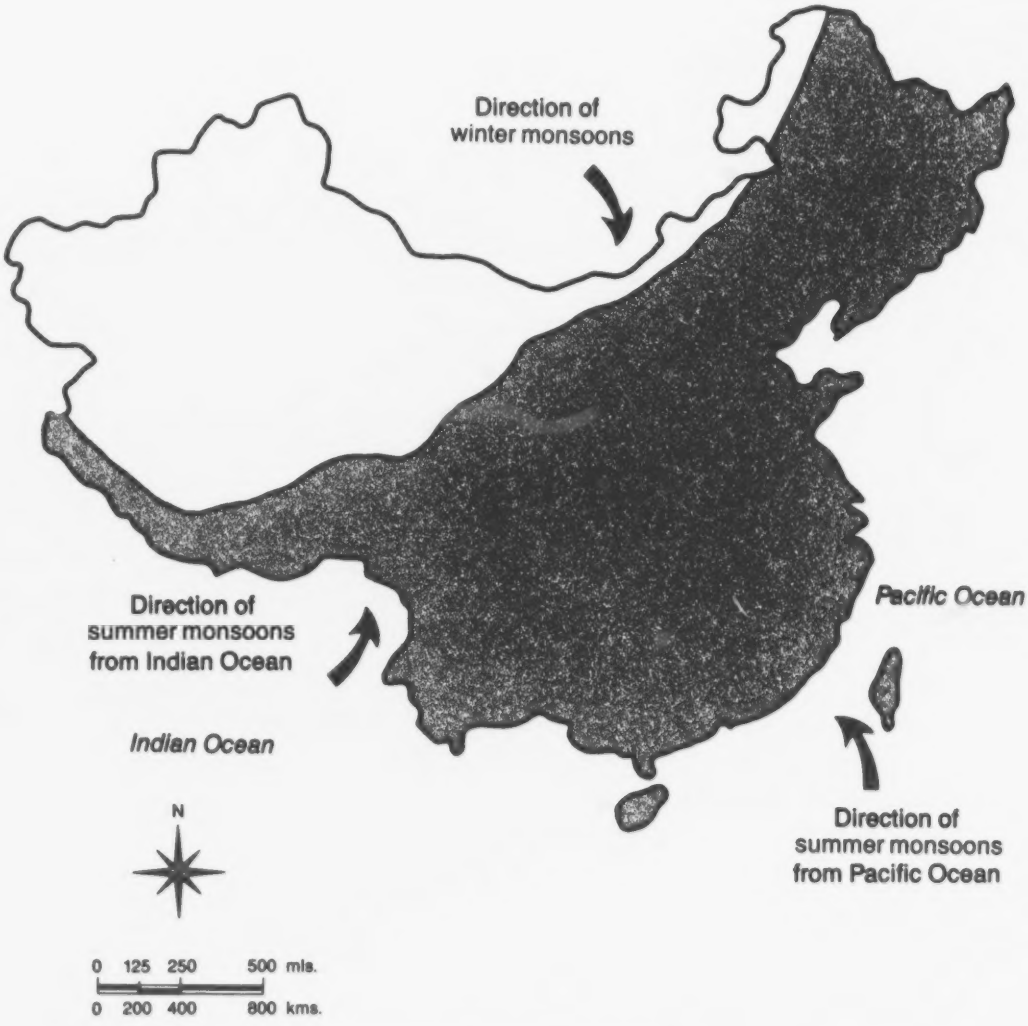


Figure 6-2: China's summer and winter monsoons

Monsoons are seasonal winds that strongly influence China's climates. In winter they are north winds that come to China from Mongolia (Figure 6-2). In summer, they are south winds that blow over China from the Pacific Ocean and Indian Ocean.

The monsoons influence China's climates in different ways. **The hot, moist air of the summer monsoons carries rain inland** (Figure 6-3). They affect most of eastern and central China. The summer monsoons have little affect on the far northwest corner of the country.

	Summer Monsoons	Winter Monsoons
Duration	April to September	September to April
Climate	wet and hot	dry and cold
Origins of predominant wind	Pacific Ocean and Indian Ocean	Siberia and Mongolia
Direction of Origin	south and east	north and west
Affects	all of South China all of North China southern fringe of West China	

Reference: China Handbook Series GEOGRAPHY, 1983.

Figure 6-3: China's summer and winter monsoons

The summer monsoons are very important to China because they provide most of the yearly rainfall. About four-fifths (80%) of the yearly rainfall comes from them. This rain is necessary for growing crops.

The yearly amount of rainfall is difficult to predict in China partly due to the uncertainty of the summer monsoons. Enough rain and warm temperatures result in good harvest (Figure 3-7 on page 65 and Figure 3-8 on page 67). Too little rain causes drought. Too much rain causes flooding. Either drought or flooding can lead to crop failures. In extreme cases, crop failures have been the cause of widespread famine and starvation.

The winter monsoons are the opposite of the summer monsoons. **They bring cold, dry air over most of China except the northwest.** Their force is commonly felt as far south as Shanghai and they often reach much farther into the South. The winter monsoons carry the loess soil particles from the deserts of Mongolia to the Loess Plateau and North China Plain Regions (Figure 3-8 on page 67 and Figure 4-13 on page 107).

C. Large Mountain Ranges

- How do the large mountain ranges influence China's temperatures?
- How do the large mountain ranges influence China's precipitation?

The third factor that affects China's climates is large mountain ranges. Chapter 4 described China's major mountains: the Greater Hinggan, Kunlun, Qinling, Tianshan, and Himalayan. These mountains influence China's temperatures and precipitation.

Major mountain ranges sometimes affect temperatures by acting as barriers to wind. In China the cold winds come mostly from the north. The major mountain ranges may prevent these cold winds from reaching to the south. Therefore, places to the south of the mountains are sometimes warmer than they would otherwise be.

China's major mountain ranges also influence precipitation. An area will receive more rainfall if the air is colder than if the air is warmer. Cold air can hold less water vapor than warm air. When the air gets cold enough, it releases some of its water vapor. When this happens it rains. As the air moves up to the top of a mountain, it cools. If it gets cold enough, it rains. As the air moves down the other side of the mountain, it warms. Therefore, it holds more water vapor, making this side of the mountain drier.

In China, the Qinling Mountain range divides the climates of the north and south. To the north the climates are colder and drier. To the south they are warmer and wetter. These mountains often block cold northern air from reaching into Sichuan.

D. Altitude

- How do China's altitudes affect its climates?
- Why do the temperatures of Shanghai and Lhasa differ?

The fourth factor that affects China's climates is altitude. **The higher the altitude of a place, the cooler is its temperature.** The temperature is cooler by about three degrees *Fahrenheit* for each increase in altitude of 1,000 feet (305 m.). If two places are at different altitudes, but at the same latitude, the place that is higher will generally be cooler than the place that is lower.

Fahrenheit (far'ən hīt) . . . . . A temperature scale where 32 degrees (32°F) marks the freezing point and 212°F marks the boiling point.

Compare the temperature of Shanghai at an altitude of 33 feet (10 m.) and Lhasa at an altitude of 12,090 feet (3,685 m.). The two cities are both at about 30 °N latitude. If just the latitude factor were considered, both would have the same temperatures. However, Shanghai is low in altitude and Lhasa is high in altitude. This is one reason why the July average temperature at Shanghai in the Yangtze Lowland is 80 °F (27 °C) whereas at Lhasa in the Tibetan Highland it is 61 °F (16 °C).

E. Distance from the Sea

- How does the distance from the sea affect China's climates?
- How does the distance to the sea affect the amount of rainfall in Xinjiang?

The last factor that affects the climates of areas in China is distance from the sea. Some areas are close to the sea. Others are far. In countries such as China, winds blow from the sea onto the land. These winds bring water vapor and therefore rainfall. **Land areas closer to the sea usually get more rainfall than areas farther from the sea** (Figure 1-5 on page 8). **In fact, some areas in China which are further from the sea may get very little rainfall.** The winds that reach them are often cooled by rising to higher altitudes so they drop their rainfall before reaching far inland.

A good example of how distance from the seas and ocean affects climates is in the Xinjiang autonomous region. Much of Xinjiang (Figure 4-15 on page 110) is desert. It is desert because winds that reach it from the Pacific Ocean not only travel a long distance but also climb the topographic staircase before reaching it. Winds from the Indian Ocean blowing towards Xinjiang have to rise over the Himalayan Mountains. In doing so, they cool and lose nearly all their water vapor as rain. These winds cause rain on the southern slopes of the Himalayan Mountains and in southern Tibet, before they reach Xinjiang.

6.3 China's Temperatures

Temperatures influence the climates of China. First, there are temperature patterns. Second, there are summer and winter variations in eastern China's temperatures.

A. Temperature Patterns

- What are the three temperature patterns in China?
- Where do these temperature patterns occur?

In this book three types of temperature patterns in China are described (Figure 6-4). **They are mostly warm, *seasonal* and mostly cool. It is mostly warm year round in the extreme south** (Figure 1-6 on page 11). **Temperatures change with the seasons over half of China, including parts of the Northeast Plain and Xinjiang. It is mostly cool in Tibet and the extreme northeast.**

B. Summer and Winter Variations in Eastern China

- What are the summer and winter temperature variations in eastern China?

Summer temperatures over eastern China vary only slightly from place to place. They range from warm to hot (Figure 6-5). However, **winter temperatures differ greatly from north to south in the east.** They range from warm in the southeast to cold in the northeast.

Compare the summer (July) and winter (January) climates of the Focus Units' capitals and special cities. The summer temperatures vary little from the south to north. The winter temperatures vary a great deal from south to north.

seasonal (sē'zn əl) . . . . . *Relating to the seasons (fall, winter, spring, summer).* *p. 161.*

Figure 6-4: China's temperature patterns

A. Temperature

City	Elevation feet (m.)	Jan.	April	July	October
SOUTH CHINA					
Canton, Guangdong	49 (15)	55°F (13°C)	71°F (22°C)	82°F (28°C)	75°F (24°C)
Shanghai	33 (10)	37°F (3°C)	55°F (13°C)	80°F (27°C)	62°F (17°C)
NORTH CHINA					
Beijing	128 (39)	41°F (5°C)	57°F (14°C)	78°F (26°C)	53°F (12°C)
WEST CHINA					
Urumqi, Xinjiang	2,952 (903)	5°F (–15°C)	48°F (9°C)	73°F (23°C)	39°F (4°C)

B. Precipitation

City	Year in. (mm.)	Jan.	April	July	October
SOUTH CHINA					
Canton, Guangdong	63 (1,618)	1 in. (23 mm.)	7 in. (173 mm.)	8 in. (205 mm.)	3 in. (86 mm.)
Shanghai	45 (1,144)	2 in. (51 mm.)	4 in. (94 mm.)	6 in. (150 mm.)	3 in. (79 mm.)
NORTH CHINA					
Beijing	25 (630)	< 1 in. (3 mm.)	< 1 in. (15 mm.)	9 in. (239 mm.)	< 1 in. (15 mm.)
WEST CHINA					
Urumqi, Xinjiang	4 (99)	< 1 in. (5 mm.)	< 1 in. (10 mm.)	< 1 in. (5 mm.)	< 1 in. (15 mm.)

< = less than

References:
- Central Meteograoical Bureau, Beijing, 1960) from CHINA, Pannell and Ma, 1983).
- Rufloff, Willy, WORLD CLIMATES, Stuttgard, 1981.
- Meteorological Office, Great Britain, TABLES OF TEMPERATURE, RELATIVE HUMIDITY AND PRECIPITATION OF THE WORLD, London, 1966.

To calculate Fahrenheit to centigrade you multiply centigrade figure by 9 and divide by 5 and then add 32, the formula is F = 9/5C + 32

To calculate centigrade to Fahrenheit you subtract 32 from the Fahrenheit figure and then multiply by 5 and divide by 9, the formula is C = (F-32) 5/9

Figure 6-5: Climate figures of China's Focus Unit capitals and special cities

centigrade (sen'tə grād) . . . . A temperature scale divided into 100 degrees. Zero degree (0°C) marks the freezing point and 100°C marks the boiling point.

6.4 China's Precipitation

Precipitation affects the climates of China. The rainfall levels vary over different parts of China. In extreme cases there can be floods or droughts.

A. Precipitation Levels

- What are three levels of precipitation in China?
- Where do these precipitation levels occur in China?

In this book, China's precipitation is categorized into three levels. They are high, moderate and low (Figure 6-6). **The high levels are mostly in the southeast. The moderate levels are inland from the east coast and into the northeast. Almost all of the west and the inland area of the northeast have low levels. Overall, China's rainfall decreases gradually in a southeast to northwest direction.**

B. Floods and Droughts

- Why are there floods and droughts in China?
- What happens to the Chinese people during droughts?

Occasional major flooding occurs on the North China Plain and Yangtze Lowland. The floods occur after periods of unusually heavy rainfall. **North China also has periods of unusually low rainfall over large areas.** Widespread droughts occur on the North China Plain about every five to 10 years.

During droughts, Chinese farmers do not get enough rainfall for their crops to grow well. Therefore, they harvest less than they would in a season of normal rainfall. When droughts last a long time and affect large areas of farm land, famine can occur.

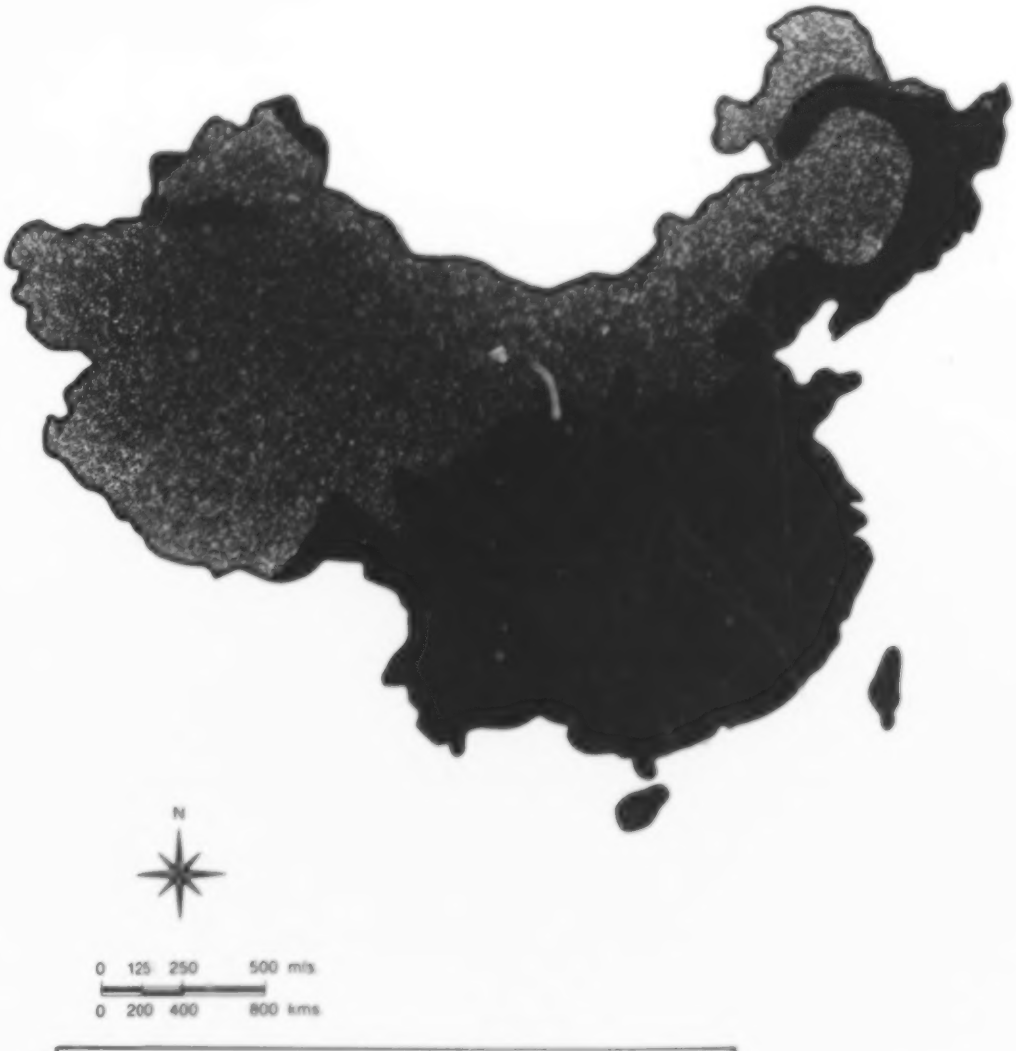


Figure 6-6: China's precipitation levels

6.5 Comparison of Climates between China and the United States

- What are the comparisons between the climates of China and the United States?

There are comparisons between the climates of China and the United States. In South China, the climates are mostly warm and rainy. They are very much like the climates in the south of the United States from Florida to Texas. However, the extreme southern part of China is warmer than southern United States because it is nearer to the equator. Hainan island's climate, for example, is like that of Puerto Rico.

In North China, the climates are warm to cool and moderately wet. They are much like the climates of Oklahoma, Kansas, Nebraska and North Dakota in the United States. The extreme northern part of China is farther north than those states. This gives the extreme north a climate more like that of the Canadian province of Alberta.

West China is mostly cool to cold and dry. In Xinjiang the climates are like those in Nevada and Wyoming. In Tibet the climates are like those of the high mountains of Colorado. Only very small parts of the United States are as high in altitude as the large area of Tibet. Therefore, more of China is cold.

6.6 Population Distribution

- How do China's temperatures affect its population distribution?
- How does China's precipitation pattern affect its population distribution?

China's climates strongly influence where the Chinese people live and how many live there. The population distribution pattern in China, as in many countries, varies to some extent in relation to the patterns of climate. China is very densely or densely populated when two climate patterns occur. The first pattern consists of hot or warm temperature in the summer. The second pattern consists of moderate or high amounts of precipitation (20 or more inches).

Compare China's population distribution pattern with China's pattern of temperatures (Figure 3-3 on page 59 and Figure 6-4). In the warm sections of the country, the population pattern is mostly very dense and dense. Where summers are warm to hot and winters cold (seasonal), population densities vary from very dense to very sparse. These densities are related more to landform features and precipitation levels than to temperatures. The mostly cool sections of China are very sparsely populated.

Next compare the population distribution pattern with the precitita-tion pattern (Figure 3-3 and Figure 6-5). A quick glance suggests the patterns are almost identical. A high level of precipitation supports rice growing which in turn supports very dense populations. A moderate level of precipitation encourages wheat farming and some rice farming which supports very dense and dense populations. Low precipitation allows animal husbandry which supports sparse populations.

6.7 Geographic Regions and Focus Units

- How are South China, North China and West China affected by climate?
- How are the Focus Units affected by China's climate?

(S) **South China has hot, rainy summers and warm, moderately rainy winters.** (Figures 6-7 and 6-8). **The climates are ideal for rice farming.** The Chinese people can grow two rice crops, or one crop of rice and one crop of wheat, in the Yangtze Lowland, Sichuan Basin and Southeast Lowland Regions (Figure 3-7 on page 65). Three rice crops grow in the extreme southeast. These areas are very densely populated. **Canton, Chengdu and Shanghai have typical South China climates.**

(N) **The climates of North China have seasonal temperatures and moderate amounts of rainfall. They are good for growing wheat in the extreme northeast the winters are harsh** (Figure 6-9). The Chinese people grow one wheat crop per year in the North China Plain, Northeast Plain and Loess Plateau Regions (Figure 3-8 on page 67). In summer they grow crops such as corn, soybeans, fruits and vegetables. These regions support very dense and dense populations. **Beijing and Xi'an experience typical North China climates.**

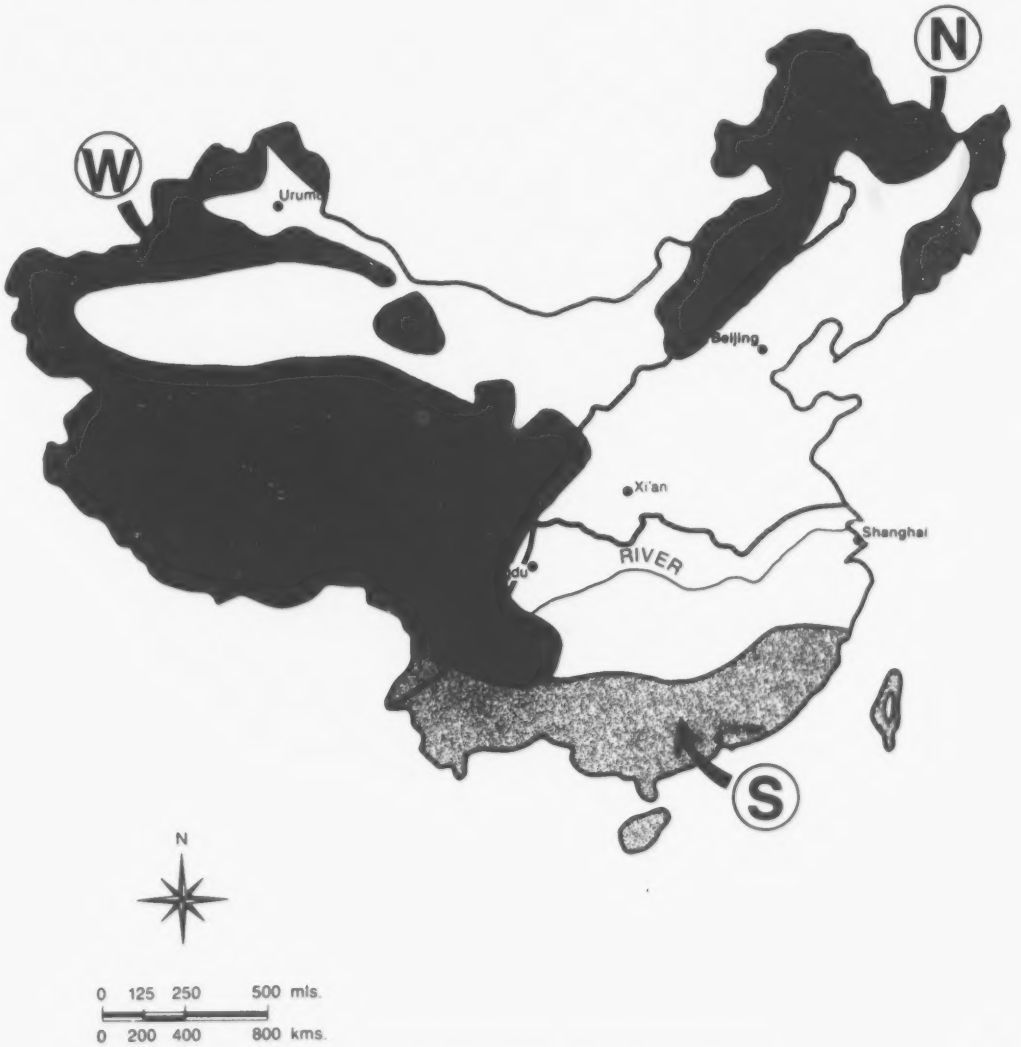
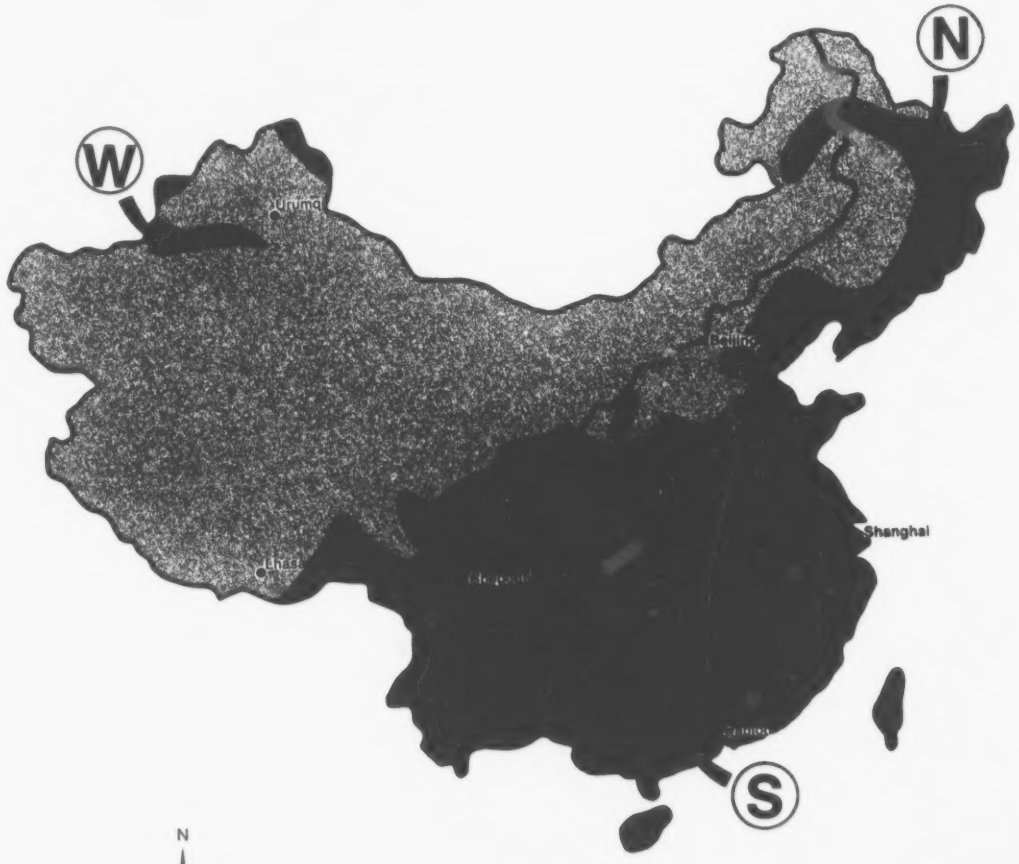


Figure 6-7: China's temperature levels by Geographic Regions



KEY

	Precipitation	
	Inches	Millimeters
High	Over 50	Over 1250
Moderate	21-50	501-1250
Low	0-20	0-500

Figure 6-8: China's precipitation levels by Geographic Regions

Figure 6-9: Winter in Jilin province, China

West China's climates differ from those of South China and North China. West China has cool seasonal temperatures and little rainfall. Many food crops cannot grow without irrigation. In irrigated areas, such as the oases in Xinjiang, summer crops thrive. The crops include wheat, cotton, vegetables and many fruits. Urumqi, located in an oasis, is very densely populated. However, most of West China is very sparsely populated. **The climate of Urumqi has seasonal temperatures with little rainfall. The climate of Lhasa is cool with little rainfall.**

6.8 Summary

The climates of China, like all large countries, vary over its territory. China's climates are strongly influenced by five factors. They include latitude, monsoons, large mountain ranges, altitude and distance from the sea.

In general, temperatures are hotter at latitudes closer to the equator and cooler at latitudes farther from the equator. China's low latitudes are usually hotter than its higher latitudes. China is mostly a middle latitude country, but the south is in the low latitudes.

Monsoons are seasonal winds that strongly influence China's climates. The hot, moist air of the summer monsoons carries rain inland. The summer monsoons are very important to China because they provide most of the yearly rain. The yearly amount of rainfall is difficult to predict in China partly due to the uncertainty of the summer monsoons. The winter monsoons bring cold, dry air over most of China except the northeast.

Major mountain ranges sometimes affect temperatures by acting as barriers to wind. China's major mountain ranges also influence precipitation. In China, the Qinling Mountain range divides the climates of the north and south.

The higher the altitude of a place, the cooler are its temperatures. In China, the Lowland is warmer than the Highland.

Land areas closer to the sea usually get more rainfall than areas farther from the sea. In fact, some areas in China which are far from the sea and seas may get very little rainfall.

It is possible to identify three types of temperature patterns in China. They are mostly warm, seasonal and mostly cool. It is mostly warm year round in the extreme south. Temperatures change with the seasons over half of China, including parts of the Northeast Plain and Xinjiang. It is mostly cool in Tibet and the extreme northeast.

Summer temperatures over eastern China vary only slightly from place to place. Winter temperatures differ greatly from north to south in the east.

In this book, China's precipitation is categorized into three levels. They are high, moderate and low. The high levels are mostly in the southeast. The moderate levels are inland from the east coast and into the northeast. Almost all of the western and inland areas of the northeast have low levels. China's rainfall decreases gradually in a southeast to northwest direction.

Occasional major flooding occurs on the North China Plain and Yangtze Lowland. North China also often has periods of unusually low rainfall over large areas.

China's population strongly influences where the Chinese people live and how many live there. The population distribution pattern in China, as in many countries, varies in relation to the patterns of climate. China is very densely or densely populated where two climatic patterns occur. The first pattern consists of hot or warm temperatures in summer. The second pattern consists of moderate or high amounts of precipitation (20 or more inches).

South China has hot, rainy summers and warm, moderately rainy winters. The climates are ideal for rice farming. Canton, Chengdu and Shanghai have typical South China climates. The climates of North China have seasonal temperatures and moderate amounts of rainfall. They are good for growing wheat. In the extreme northeast the winters are harsh. Beijing and Xi'an experience typical North China climates. West China's climates differ from those of South China and North China. West China has cool to seasonal temperatures and little rainfall. Many food crops cannot grow without irrigation. The climate of Urumqi has seasonal temperatures with little rainfall. The climate of Lhasa is cool with little rainfall.

Resources

A. Print Material

- Due to space limitations, there are more recommended printed materials than the ones listed below. Write for additional list to CHINA CONNECTIONS PROGRAM, Community Learning Connections, Inc., 75 Mt. Vernon Street, Boston, MA 02108.
- Write to the following for book lists/catalogs on China:

1. A.R.T.S., Inc., 32 Market Street, New York, NY 10002
2. The Asia Society, Inc., 725 Park Avenue, New York, NY 10021
3. Center for the Teaching about China, US-China People's Friendship Association, 2025 "I" Street NW, Washington, DC. 20002
4. Cheng & Tsui Co., 25 West Street, Boston MA
5. China Books and Periodicals, Inc., Mail Order Department, 2929-24th Street, San Francisco, CA 94110 or phone order (San Francisco, CA) 415/282-2994
6. GETTING TO KNOW CHINA THROUGH BOOKS: AN ANNOTATED BIBLIOGRAPHY OF CHILDREN'S BOOKS — KINDERGARTEN — 9th GRADE, compiled by Juana L. Dong. Service/Cultural Committee, Stanford Area Chinese Club, P.O. Box 1147, Palo Alto, CA 94301
7. Informational Center on Children's Cultures, 331 East 38th Street, New York, NY 10016
8. RECOMMENDED EAST ASIAN CORE COLLECTION FOR CHILDREN'S HIGH SCHOOL, PUBLIC COMMUNITY COLLEGE AND UNDERGRADUATE COLLEGE LIBRARIES by William H.O. Scott. University of Washington Libraries, Seattle, WA 98105
9. (SPICE) Stanford Program on International and Cross-Cultural Education, Lou Henry Hoover Building, Room 200, Stanford University, Stanford, CA 94305 (SPICE)

I. Nonfiction:

- A FAMILY IN CHINA. Nance Lui Fyson and Richard Greenhill (Lerner Publications, 1985).
- THE GIANT PANDA. Ramona and Desmond Morris (Penguin Books, 1981).
- HOLDING UP THE SKY: YOUNG PEOPLE IN CHINA. Margaret Rau (Lodestar Books, 1983).
- THE MINORITY PEOPLES OF CHINA. Margaret Rau (Julian Messner, 1982).
- RED STAR AND GREEN DRAGON: LOOKING AT NEW CHINA. Lila Perl (William Morris and Company, 1983).
- THE PEOPLE OF NEW CHINA. Margaret Rau (Julian Messner, 1978).
- THE PEOPLE'S REPUBLIC OF CHINA. Margaret Rau (Julian Messner, 1978).

II. Fiction and Folktales:

- CHINESE FAIRY TALES & FANTASIES. Moss Roberts, editor. (Pantheon Books, 1979).
- DRAGONS, GODS & SPIRITS FROM CHINESE MYTHOLOGY. Tao Tao Liu Sanders (Schocken Books, 1980).
- FAVORITE CHILDREN'S STORIES FROM CHINA AND TIBET. Lotta Carswell Hume (Charles E. Tuttle, Co., 1981).
- FAVORITE FOLKTALES OF CHINA. (Beijing: New World Press, 1983).
- SWEET AND SOUR TALES FROM CHINA. Carole Kendall (Seabury, 1979).

III. Games/Activities/Crafts

- CHINESE CHILDREN'S GAMES. Fung Shiu-ying (A.R.T.S., 1976).
- CHINESE CULTURAL ACTIVITIES. Vol. 1 & 2 (A.R.T.S., 1977).
- THE CHINESE CUT-OUT BOOK. Romano Jablonsku (Stemmer House, 1980).
- CHINESE CUT-PAPER DESIGNS. Selected by Theodore Menten. (Dover Publications, 1975).
- CHINESE PAPERCUTS. Florence Temko (China Books and Periodicals, 1981).
- FUN WITH CHINESE CHARACTERS, VOLUMES 1-3. Tan Huay Peng (Federal Publications, 1980-1983).
- THE FUN WITH TANGRAMS KIT. Susan Johnson (Dover Publications, 1977).
- PAPER DOLLS OF CHINA. The Musuem of Science and Industry (Chicago Review Press, 1983).
- PAPER LANTERNS, Shiah Mann (A.R.T.S., 1974).
- TREASURY OF CHINESE DESIGN MOTIFS. Joseph D'Addetta (Dover Publications, 1981).

IV. Magazines (order through China Books and Periodicals, Inc.)

- CHINA PICTORIAL
- CHINA RECONSTRUCTS
- CHINA'S SCREEN
- CHINA'S SPORTS
- CHINESE LITERATURE
- WOMEN OF CHINA

B. Audio-Visual

- AN AMERICAN FAMILY IN CHINA (video cassette). Community Learning Connections, Inc., 1984.
- THE PEOPLE'S REPUBLIC OF CHINA (sound filmstrips) National Geographic Society, 1983.

C. Community Resources

- art museums
- Chinatowns in major cities
- Chinese organizations (check telephone book under China or Chinese)
- Chinese restaurants
- historical museums
- public libraries
- students in academic programs in colleges, universities — contact East Asian Department, foreign students organizations
- travel agencies

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STATISTICAL ABSTRACT OF THE UNITED STATES, 1985. Washington, D.C.: U.S. Department of Commerce, 1948.

Thorndike, E.L. and Clarence L. Barnhart. SCOTT, FORESMAN INTERMEDIATE DICTIONARY. Glenview, Illinois: Scott, Foresman and Co., 1983.

Tien, H. Yuan. CHINA: DEMOGRAPHIC BILLIONAIRE, Bulletin, Vol. 38, No. 2. Washington, D.C.: Population Reference Bureau, 1983.

THE WORLD ALMANAC AND BOOK OF FACTS, 1985. New York: Newspaper Enterprise Association, Inc., 1984.

1985 WORLD POPULATION DATA SHEET. Washington D.C.: Population Reference Bureau, Inc., 1985.

Glossary

A. Pronunciation Key

a	hat, cap	**ou**	house, out
ā	age, face	**sh**	she, rush
â	care, air	**th**	thin, both
ä	father, far	**ŦH**	then, smooth
ch	child, much	**u**	cup, butter
e	let, best	**ú**	full, put
ē	equal, see	**ü**	rule, move
ėr	term, learn	**zh**	measure, seizure
i	it, pin	**ə**	represents:
ī	ice, five		**a** in about
ng	long, bring		**e** in taken
o	hot, rock		**i** in pencil
ō	open, go		**o** in lemon
ô	order, all		**u** in circus
oi	oil, voice		

This Key to Pronunciation is from *Scott, Foresman Intermediate Dictionary*, by E.L. Thorndike and Clarence L. Barnhart. Copyright © 1983, by Scott, Foresman and Company. Reprinted by permission.

B. Vocabulary

The page refers to where the word is first introduced in text.

acupuncture *(ak' yü pungk' cher). A Chinese medical practice that attempts to cure illness or reduce pain by inserting needles into specific parts of the body.* p. 32.

agrarian *(əgrer'ē ən). Relating to farming.* p. 64.

animal husbandry
(an'ə məl huz'bən drē). The taking care of animals. p. 61.

aquaculture *(ak'wəkul'cher). The growing of water products under artificial conditions, such as breeding fish in ponds.* p. 125.

archeological *(är'kē ə loj'əkəl). Relating to the study of ancient times and ancient people, conducted by digging up the remains of buildings and other relics of human activity.* p. 43.

autonomous *(ô ton'ə məs). Self rule or self-governing.* pg. 23.

autonomous region *(ô ton'ə məs rē'jən). One of three types of governing units in China directly under the central government. This region has a large number of national minority people.* p. 23.

brocade *(brō kād'). A cloth with a raised design woven into it.* p. 11.

Buddhism *(bü'diz əm). A religion from India based on the belief that life is suffering. One can strive to relieve this suffering by observing certain Buddhist practices.* p. 48.

census *(sen'səs). An official count of the number of people in a country.* p 57.

centigrade *(sen'tə grād). A temperature scale divided into 100 degrees. Zero degree (0°C) marks the freezing point and 100°C marks the boiling point.* p. 163.

Chinese Lunar New Year
(chī nēz' lü'nər nü yir). A celebration that begins on the day of the first new moon of the lunar calendar, sometime between January 21st and February 19th. It is also called "Spring Festival". It is a national three-day holiday. China has also observed the January 1st New Year since 1911. p. 34.

continental shelf *(kon'tən en'tl shelf). An area of shallow water next to a continent.* p. 9.

course *(kōrs). The path of a river.* p. 134.

cuisine *(kwi zēn'). A style of cooking.* p. 31.

delta *(del'tə). Usually a fan-shaped formation of earth collected at the mouth of a river. Many of the major deltas of the world are extensively cultivated and support dense populations of farmers.* p. 134.

dike *(dīk). A barrier for holding back the waters of a river or sea.* p. 128.

dynasty *(dī'nə stē). A period of rule by a single family. An inherited rule always passed through male members of a family.* p. 40.

B. Vocabulary (Cont.)

endangered species *(en dān'jənd spē'shēz). A category of animal or plant that is dying to the point of extinction.* p. 33.

engineering feat *(en'jə nir'ing fēt). An accomplishment making practical use of scientific knowledge in the engineering field.* p. 138.

erosion *(i rō'zhən). The process of eating or wearing away of soil.* p. 106.

Fahrenheit *(far'ən hīt). A temperature scale where 32 degrees (32°F) marks the freezing point and 212°F marks the boiling point.* p. 159.

fodder *(fod'ər). Coarse food, such as cornstalk, feed to livestock.* p. 67.

hemisphere *(hem'ə sfir). One of two halves of a sphere.*

— ***northern hemisphere.*** *The half of the world north of the equator.* p. 4.

— ***southern hemisphere.*** *The half of the world south of the equator.*

— ***eastern hemisphere.*** *The half of the world east of the prime meridian (0°).* p. 5.

— ***western hemisphere.*** *The half of the world west of the prime meridian (0°).* p. 5.

hydroelectric *(hī' drō i lek'trik). Electricity produced by harnessing the power of falling water.* p. 124.

industry *(in'də strē). The business of producing a particular kind of good or providing a service; examples of goods are bicycles and clothes; examples of services are telephone repair and banking.* p. 62.

irrigate *(ir'ə gāt). To supply land with water by artificial means.* p. 91.

junk *(jungk). A Chinese sailing ship.* p. 138.

karst *(kärst). In China, limestone hills that are narrow and tall. They are common in the Guilin area of Guangxi province.* p. 100.

labor intensive *(lā'bər in ten'siv). Relating to or involving a great deal of human labor.* p. 66.

Lamaism *(lä'məiz'əm). A form of Buddhism. (See Buddhism).* p. 48.

litchi *(lē chē) A sweet oval fruit grown in the warm climates of China.* p. 11.

local transportation
(lō'kəl trans'spər tā'shən). Carrying goods a short distance. p. 139.

loess *(lō'is). A wind-carried deposit of fine soil. In China, the soil is yellow and grainy.* p. 105.

manual *(man'yü əl). Relating to work done by hand.* p. 66.

meridian *(mə rid'ē ən). Line of longitude encircling the globe in a north/south direction.* p. 5.

metropolitan area *(met'rəpol'ə tən er'ē e). A major city and the densely populated surrounding areas.* p. 72.

middle latitude area
(mid'l lat'ətüd ar'ē). An area that is located between the parallels of 30° and 60° in the northern and southern hemispheres. p. 155.

B. Vocabulary (Cont.)

monsoon *(mon sün'). A wind system in which the main winds change directions blowing from sea to land in the summer and land to sea in the winter.* p 154.

national minority *(nash'ə nəl mi nôr'ə ĭ'e). In China, a group of people with common language, customs and origin that is different from the majority of Chinese. The majority of Chinese are of Han descent (94%). National minorities make up the rest — six per cent (6%).* p. 23.

navigable *(nav'ə gə bəl). Wide enough and deep enough to permit passage of ships.* p. 9.

nomad *(nō'mad) A person who wanders from place to place in search of food and pasture and has no fixed home location.* p. 45.

opera *(op'ər ə). A play in which the actors sing the dialogue. An orchestra accompanies the singers. In China, the actors also perform acrobatic acts.* p. 31.

parallel *(par'ə lel). Line of latitude encircling the globe in an east/west direction.* p. 4.

pinnacle *(pin'ə kəl). A pointed, towering formation often of rock.* p. 100.

population density
(pop'yə lā'shən den'sə tē). The number of people in a given area, such as a square mile or square kilometer. An example would be part of a city. p. 57.

population distribution
(pop'yə lā'shən dis'trə byü'shən). The pattern of population densities over a large area, such as a country. p. 57.

precipitation *(pri sip'ə tā'shən). Rain, mist, sleet, hail and snow. In this book it refers to rainfall.* p. 154.

province *(prō'vəns). One of three types of governing units in China directly under the central government. Provinces make up most of China's governing units.* p. 17.

reach *(rēch). An unbroken stretch of a river between two bends. "Upper" reaches refer to those at the source (beginning) of a river. "Middle" reaches are those in the middle of the river. "Lower" reaches refer to those near the mouth (end) of the river.* p. 134.

reforestation *(rē'fôr ə stā'shən). A replanting of trees.* p. 96.

reservoir *(rez'ər vwär). A human-made lake that stores water.* p. 128.

resource *(rē'sôrs). A usable stock or supply.* p. 9.

river system *(riv'ər sis'təm). Several rivers located in the same vicinity.* p. 134.

rural *(rür'əl). Relating to the countryside.* p. 21.

seasonal *(sē'zn əl). Relating to the seasons (fall, winter, spring, summer).* p. 161.

silt *(silt). Fine, loose earth material that is carried by moving water and deposited as sediment.* p. 124.

special city *(spesh'əl sit'ē). One of three types of governing units in China directly under the central government. It is a major industrial area.* p. 21.

suburban *(sə bėr'bən). Relating to the land surrounding the city.* p. 21.

B. Vocabulary (Cont.)

temperature *(tem′pər ə chər). A measure of the degree of hotness or coldness.* p. 154.

terraced slope *(ter′ist slōp). A slope that has been carved into a series of flat platforms or terraces.* p. 94.

topography *(tə pog′rə fe). The study of the physical features of a given place such as a country or region. One aspect is landforms.* p. 82.

tributary *(trib′yə ter′ə). A stream that flows into a larger stream.* p. 134.

turbine *(ter′bĭn). A machine with movable blades. By forcing water against the blades, electricity can be generated.* p. 126.

urban *(er′bən). Relating to the city.* p. 21.

westerners *(wes′tər nərs). Referring to Europeans and Americans.* p. 28.

C. Chinese Proper Names Pronounciation

1. Chinese Spelling

The spellings of certain words in Chinese can be confusing. That's because the Chinese language is written with characters, not a western alphabet like English or French. Therefore, when scholars translated Chinese words into English, they had to approximate the sound of the word the best they could using a western alphabet. Naturally, different scholars thought certain words should be translated with different letters. That is why, in the past, there have been different spellings.

In 1979 the Chinese central government approved a spelling system for all foreign language publications. It is called "pinyin". This book uses the pinyin spelling system. The chart below compares the pinyin spelling of the Chinese governing units with the most commonly accepted former spellings.

A few words in this book are in the former spelling. This is because these words have become common to the English language. These words are Canton, Harbin, Hohhot, Inner Mongolia, and Tibet. They are underlined in the chart to identify them. You will also hear and see Peking frequently used instead of Beijing.

2. Chinese Pronounciations

a. Chapter 2: Governing Units
Pinyin Spellings, Pinyin Pronounciations and Former Spellings of Chinese Governing Units and Capitals

Governing Units — Capital of Governing Units

Provinces			Capital	
Pinyin with Pronunciation		Former	Pinyin with Pronunciation	Former
1. Anhui	- Än hwāy	Anhwei	Hefei - Hō fāy	Hofei
2. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
3. Gansu	- Gän' *sū*	Kansu	Lanzhou - Län jō	Lanchow
4. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
5. Guizhou	- Gwei jō	Kuichow	Guiyang - Guāy yäng	Kuiyang
6. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7. Heilongjiang	- Hāy lüng jiäng	Heilungkiang	Ha'erbin - Häer bin	Harbin - Har bin
8. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
9. Hubei	- Hü bāy	Hupei	Wuchang - Wu hän	Wuchang
10. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
11. Jiangsu	- Jiäng sü	Kiangsu	Nanjing - Nän jing	Nanking
12. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
13. Jilin	- Jē lin	Kirin	Changchun - Chäng chün	Changchun
14. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
15. Qinghai	- Ching hĭ	Tsinghai	Xining - Shē ning	Sining
16. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
17. Shandong	- Shän dŭng	Shantung	Jinan - Jē nän	Tsinan
18. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
19. Sichuan	- Sə chuän	Szechwan	Chengdu - Chang dü	Chengtu
20. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
21. Yunnan	- Yün nän	Yunnan	Kunming - Kün ming	Kunming
22. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Special City				
23. Beijing	- Bāy jing	Peking		
24. [illegible]	[illegible]	[illegible]		
25. Tianjin	- Tɛən jēēn	Tientsin		
Autonomous Region				
26. Guangxi	- Guäng shē	Kwangsi	Nanning - Nän ning	Nanning
27. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
28. Ningxia	- Ning shiä	Ninghsia	Yinchuan - Yin chuän	Yinchwan
29. [illegible]	[illegible]	[illegible]	[illegible]	[illegible]
30. Xizang	- Shē zang	Tibet - Tibet	Lhasa - Lä sä	Lhasa

Pronounciation: All connecting vowels are pronounced as dipthongs (they are pronounced together, not separately)

b. Chapter 4: Landforms

1. Himalayan	- Him ā lāy ān
[illegible]	[illegible]
3. Junggar	- Jun gär
[illegible]	[illegible]
5. Nanling	- Nän ling
[illegible]	[illegible]
7. Tianshan	- Tēən shän

c. Chapter 5: Waterways

1. Chiang Jiang	- Chiäng Jiäng
[illegible]	[illegible]
3. Huai	- Huäē
[illegible]	[illegible]
5. Poyang	- Pō yäng
[illegible]	[illegible]
7. Yangtze	- Yäng zə

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